

U.S. DEPARTMENT OF ENERGY



SOLAR DECATHLON 2009

LEED for Homes:

Green from the Ground Up

U.S. DEPARTMENT OF
ENERGY



National Renewable
Energy Laboratory
Innovation for Our Energy Future



Your life. Plugged in.™





Agenda

- **Who is USGBC?**
- **What is LEED?**
- **How does LEED for Homes work?**





U.S. Green Building Council

- **Founded in 1993**
- **Non-profit: 501(c) 3**
- **Mission-based organization**
- **Committed to expanding sustainable building practices**
- **Headquarters in Washington D.C.
(residential: San Diego, CA)**





4 Levels of LEED Certification

Varying Performance Levels





87% of home buyers
are at least moderately knowledgeable
about green homes

(This has jumped 16% in 1 year)

with **59% very/extremely knowledgeable**





According to Green Home Owners, **Top 3 Benefits of a Green Home are:**

**1. Healthier
place to live**

**2. Lower
operating
costs**

(avg. 18% savings on
energy and water)

**3. Part
of a more
sustainable
lifestyle**





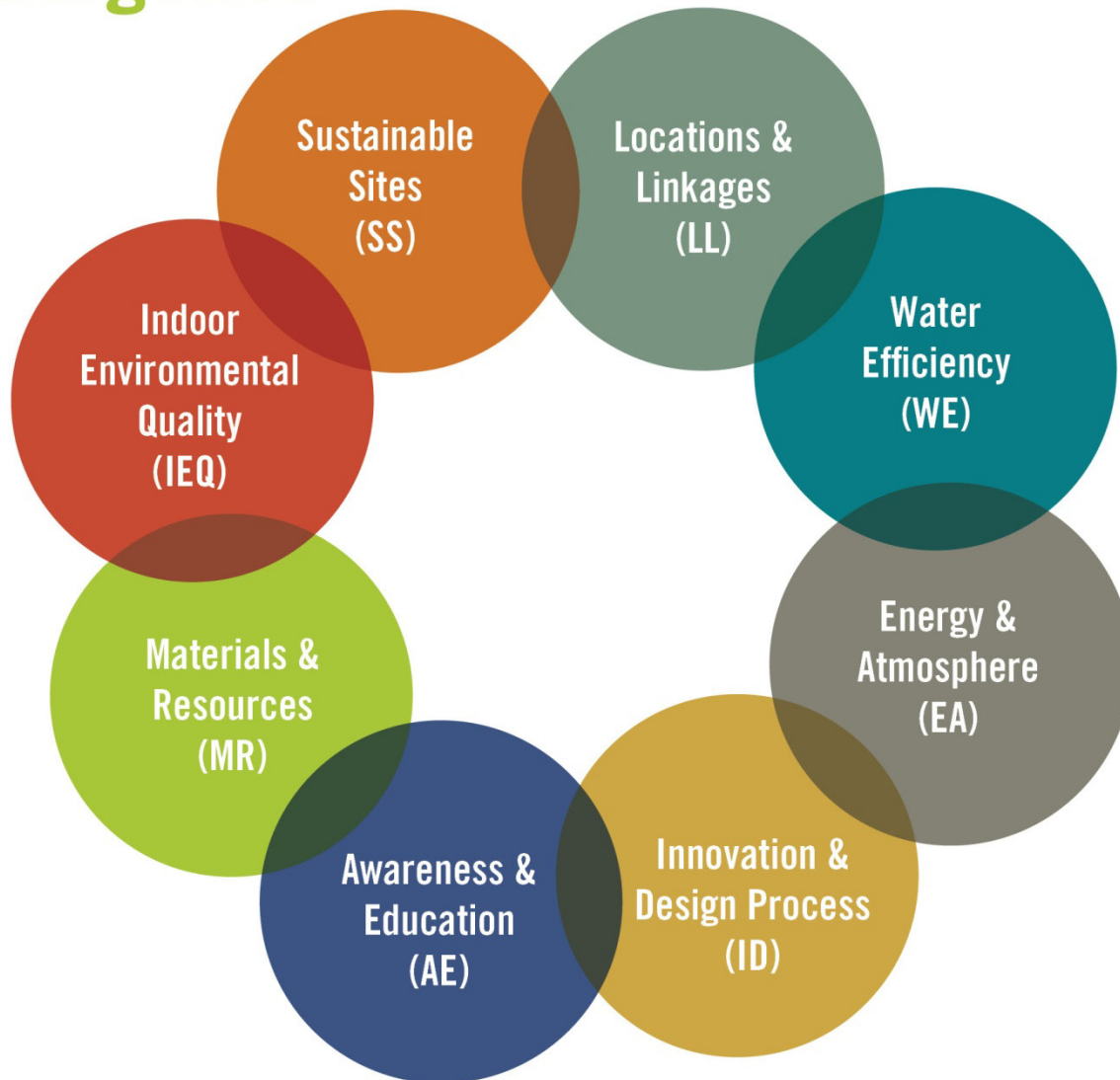
Market Trend

Market tripled in past
three years and is now
estimated to be between
\$12 and \$20B





Credit Categories





LEED for Homes Checklist



for Homes

LEED for Homes Project Checklist

Builder Name:

Project Team Leader:

Home Address (Street/City/State):

Project Description

Building Type:

Project type:

Adjusted Certification Thresholds

Certified: 45.0

Gold: 75.0

of Bedrooms: 0

Floor Area: 0

Silver: 60.0

Platinum: 90.0

Project Point Total

Prelim: 0 + 0 maybe pts Final: 0

Final Credit Category Point Totals

ID: 0 SS: 0 EA: 0 EQ: 0

Certification Level

Prelim: Not Certified Final: Not Certified

LL: 0 WE: 0 MR: 0 AE: 0

Min. Point Thresholds Not Met for Prelim. OR Final Rating

Date Most Recently Updated:

Updated by:

⚠ Indicates that an Accountability Form is required.

Max Pts. Preliminary Rating

Available Y/ Pts Maybe No

Proj

Poin

Innovation & Design Process (ID) (Minimum 0 ID Points Required)

Max: 11 Y:0 M:0

Notes

Fina

1. Integrated Project Planning

1.1 Preliminary Rating

Prereq.

Target performance tier:

1.2 Integrated Project Team (meet all of the following)

1 0 0

0

a) Individuals or organizations with necessary capabilities

c) Regular meetings held with project team

b) All team members involved in various project phases

1.3 Professional Credentialed with Respect to LEED for Homes

1 0 0

please see ID 01-06 for details

0

1.4 Design Charrette

1 0 0

0

1.5 Building Orientation for Solar Design (meet all of the following)

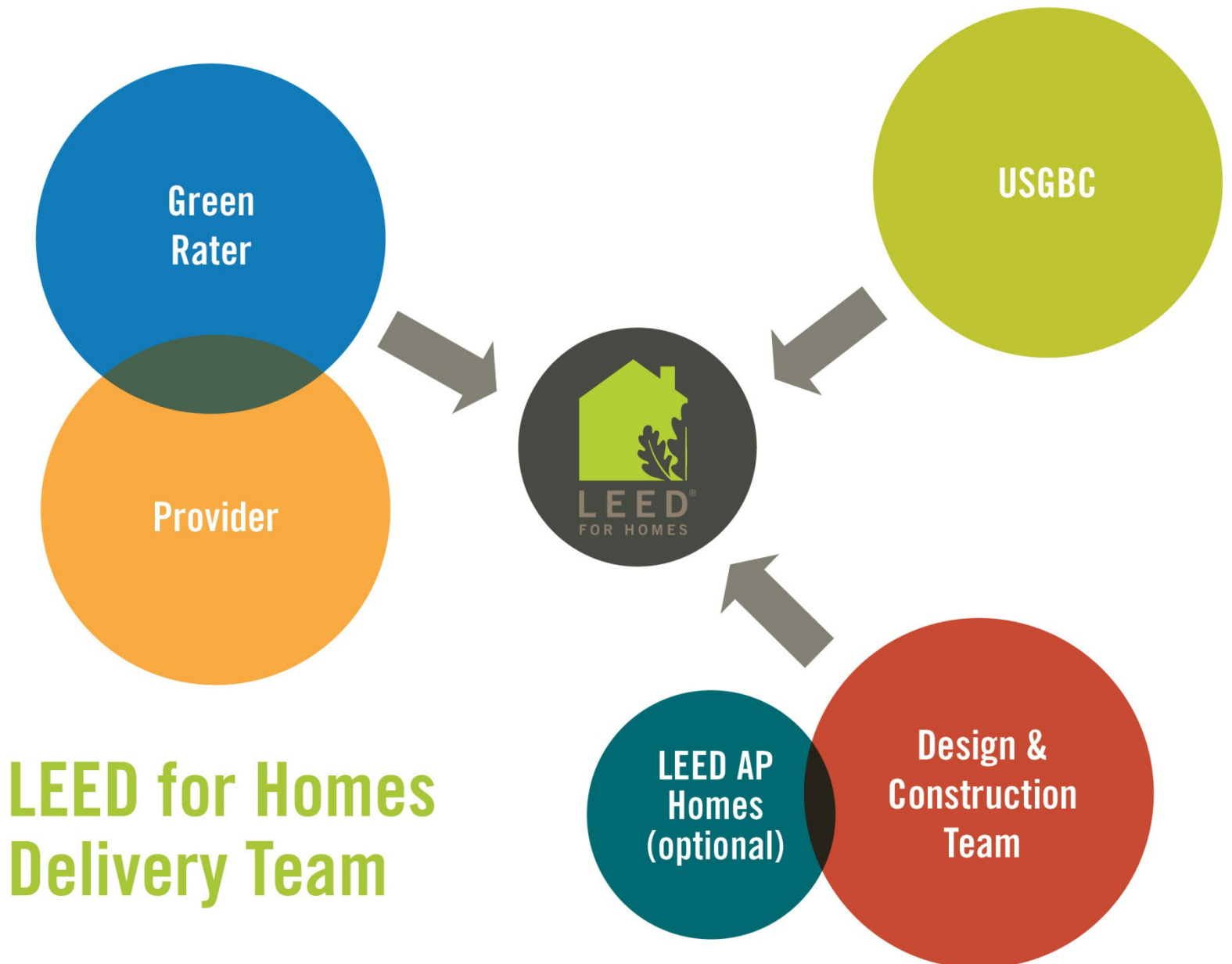
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a) Glazing area on north/south walls 50% greater than on east/west walls

c) At least 450 sq. ft. of south-facing roof area, oriented for solar applications





LEED for Homes Delivery Team





Providers: 36 Nationwide Provider Organizations



Find a list of providers here: www.usgbc.org/homes





VALUE OF 3RD PARTY CERTIFICATION

INDEPENDENT
VERIFICATION OF ACHIEVEMENTS
QUALITY ASSURANCE
AUDITABLE RESULTS

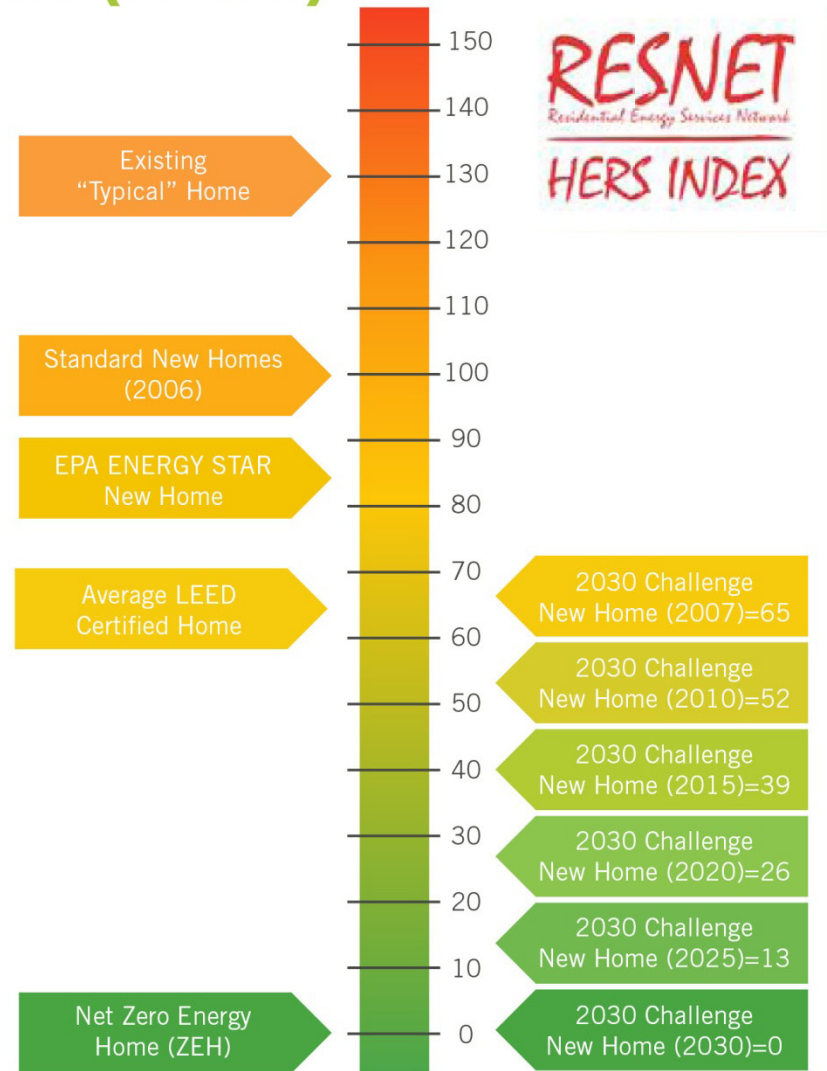




Home Energy Rating System (HERS)

Performance Testing:

- Heating and cooling
- Water heating
- Lighting
- Appliances
- Building envelope





LEED for Homes Performance Testing

List of Special Measures		Responsibility	Performance Level	
Category	Credit		Mandatory	Optional
Energy	1. ENERGY STAR Home	Rater	X	
	3. Envelope Air Leakage	Rater	X	
	5. Duct Leakage	Rater	X	
	11. Refrigerant Charge	HVAC	X	
Indoor	4.3. Outdoor Air Flow Test	Rater		X
	5.3 Exhaust Air Flow Test	Rater		X
	6.3 Supply Air Flow Test	Rater		X





39%

of Certified LEED Homes are
Affordable Homes

*As of March 2009





Registration and Certification Costs

Project Type		Registration	Certification
Single Family	USGBC Member	\$150	\$225
	Non-Member	\$225	\$300
Multifamily	USGBC Member	\$450	\$0.035/SF
	Non-Member	\$600	\$0.045/SF*

* For multifamily buildings greater than 50 units, USGBC member certification fee reduced to \$0.03/SF and non-member certification fee reduced to \$0.04/SF.





87% of green home owners

are likely to recommend a green home

to friends and family

(with 47% saying highly likely)





Next Steps

Visit www.usgbc.org/homes for:

- ✓ Rating system
- ✓ List of Providers
- ✓ Purchase Reference Guide
- ✓ Project checklist
- ✓ Education
- ✓ Affordable housing info
- ✓ Other info

