

The Current Status of LEED Homes

**Ann V. Edminster
co-chair, LEED Homes**

**Richard Faesy
LEED Homes Committee member**

But first, *why* LEED Homes?

LEED Homes is a critical component of USGBC's market transformation strategy.

- 1.4 million homes built each year
- Homes represent 55% to 60% of all environmental impacts of buildings
- Resource consumption & land use are of paramount concern

History of LEED Homes

- “LEED Residential” committee formed in early 2000
- Four technical advisory groups (TAGs) developed draft criteria
- First draft of criteria concluded late 2001

2002 Initiatives

Work focused on:

- understanding market
- understanding infrastructure needs
- building relationships
- need to grow USGBC residential membership

2003

Developments

- **February:** Steven Winter appointed co-chair
- **April:** Green Building Program Summit at Affordable Comfort
- **July:** formation of Coalition of Green Building Programs (CGBP)
- **August:** new LEED Homes Committee seated

The LEED Homes Committee

- Mack Caldwell, Ideal Homes
- Craig Collins, NAVFAC
- Dennis Creech, Southface Energy Institute
- Ann Edminster, Design AVEnues (co-chair)
- Richard Faesy, Vermont Building Greener
- Butch Gaudette, Whirlpool
- Randy Hansell, EarthAdvantage
- Joy Altwies, ASHRAE
- Ron Jones, Sierra Custom Builders
- Eric Martin, Florida Solar Energy Center
- Richard Morgan, Austin Energy
- Kathleen O'Brien, O'Brien & Company
- Sam Rashkin, US EPA Energy Star
- Kristin Shewfelt, E-Star Colorado
- Dave Ware, Owens-Corning
- Steve Winter, Steven Winter Associates (co-chair)

Institutional Partners

“Unite and conquer!”

- **Local & regional green building programs / NCGHP**
- DOE – Building America
- EPA – Energy Star
- National Association of Home Builders
- U.S. Navy
- Energy & Environmental Building Association
- Sustainable Buildings Industry Council
- Affordable Comfort
- RESNET??!!!

The Scope of LEED Homes

- Individual structures on individual sites
- Single-family detached homes
- Duplexes, row houses, townhomes ...
- Multifamily up to 3 stories
- New construction
(for now ... remodeling later!)

KEY ATTRIBUTES:

Sustainable Sites

- Infill & compact development
- Proximity to transit
- Proximity to services
- Outdoor living spaces
- **Minimizing auto dominance**

KEY ATTRIBUTES:

Energy & Atmosphere

- Quality control
- Envelope & mechanical systems performance
- Energy-efficient lighting & appliances
- Passive, renewable, & alternative energy
- "Size matters"
- ***Systems integration***

KEY ATTRIBUTES:

Indoor Environmental Quality

- Building envelope moisture control
- Combustion safety
- Ventilation/air conveyance system effectiveness
- Vehicle exhaust protection (garage design)

KEY ATTRIBUTES:

IEQ (cont'd)

- Low-emitting materials
- Universal design elements
- Home-landscape interface design
- Quality control
- *Systems integration*

KEY ATTRIBUTES:

Materials & Resources

- Optimized framing
- Design for deconstruction & adaptability
- Building reuse, deconstruction, & recycling
- Environmentally preferable materials
- “Size matters” (AGAIN!)
- Envelope durability
- ***Systems integration***

KEY ATTRIBUTES:

Water

- Water-efficient fixtures & landscaping
- Innovative wastewater technologies
- Reduced energy demand associated with hot water
- Drain water heat recovery
- Water catchment

Infrastructure Challenges

- Program economics
- Inter-program compatibility
- Delivery – who & how?
- Multiple tiers or just one?
- Homeowner education

Technical Challenges

- Size matters ... but how *much*?
- Baseline criteria (prerequisites)
- Regional adaptability
- Durability protocols
- ***Systems integration***
- ...

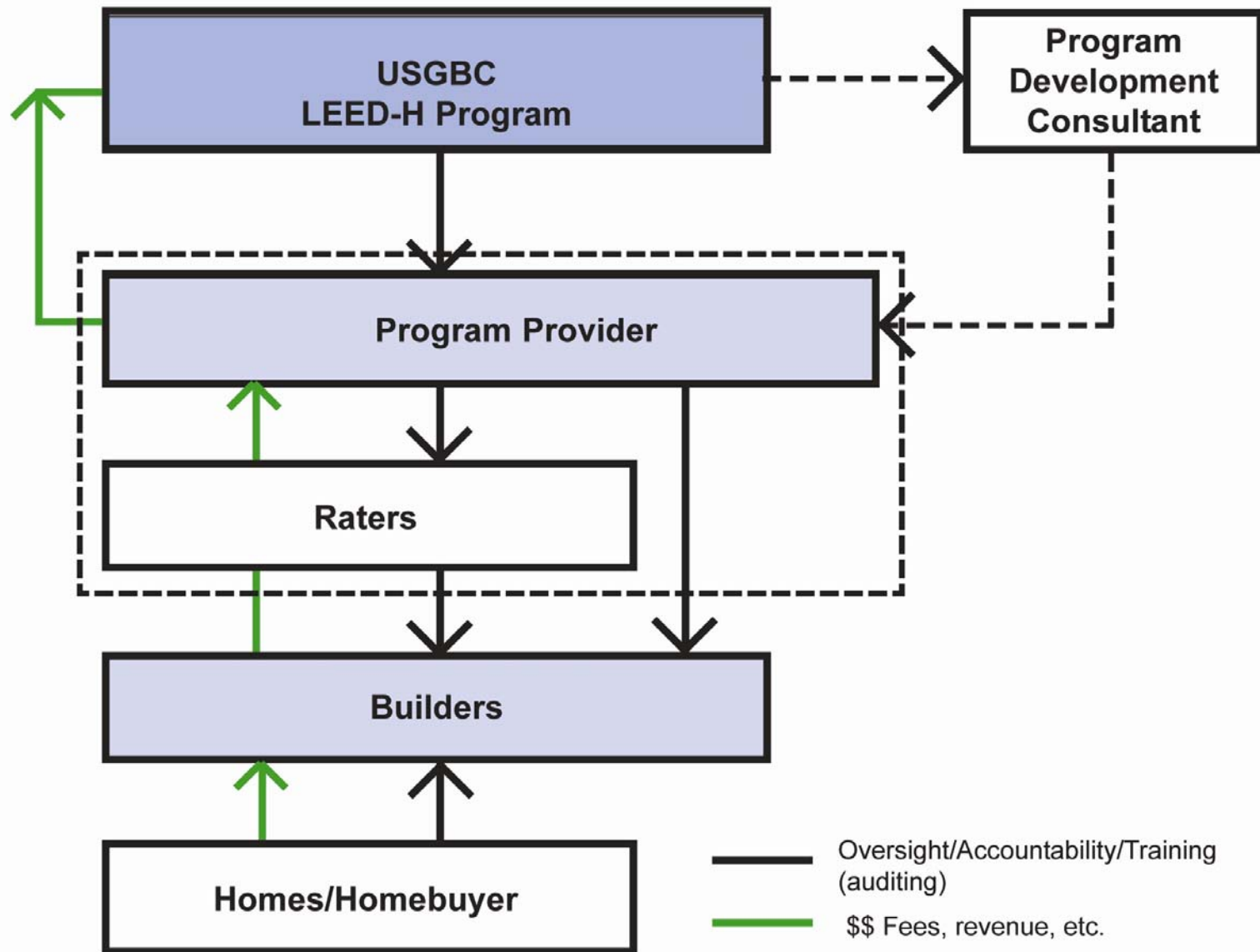
Where We Are Now

- RFP for contractor to:
 - Survey of local/regional program criteria
 - Analysis & comparison w/LEED Homes draft criteria
 - Compiling the “best of the best”
 - Development of LEED-H rating system
 - Review and finalize draft with Committee
 - Pilot test LEED-H in 50+ projects in 2005
- Business plan development
- Grounding criteria and delivery system in realities of the industry

And Where We're Headed

- **Take it away, Richard ...**

LEED Home Flow



USGBC

- Accredits providers
- QA/QC (“audits” of all players)
- Provider recruiting
- Web-based data management system
- Program implementation and support training

Program Providers

- Similar roles to RESNET providers
- Accredited by USGBC
- Responsible for raters
 - QA/QC (“auditing”)
 - Maintain database of certified homes
- Envisioned Providers:
 - RESNET providers
 - Military
 - Developers
 - Universities
 - Affordable Housing Non-Profits
 - HUD
 - Utilities

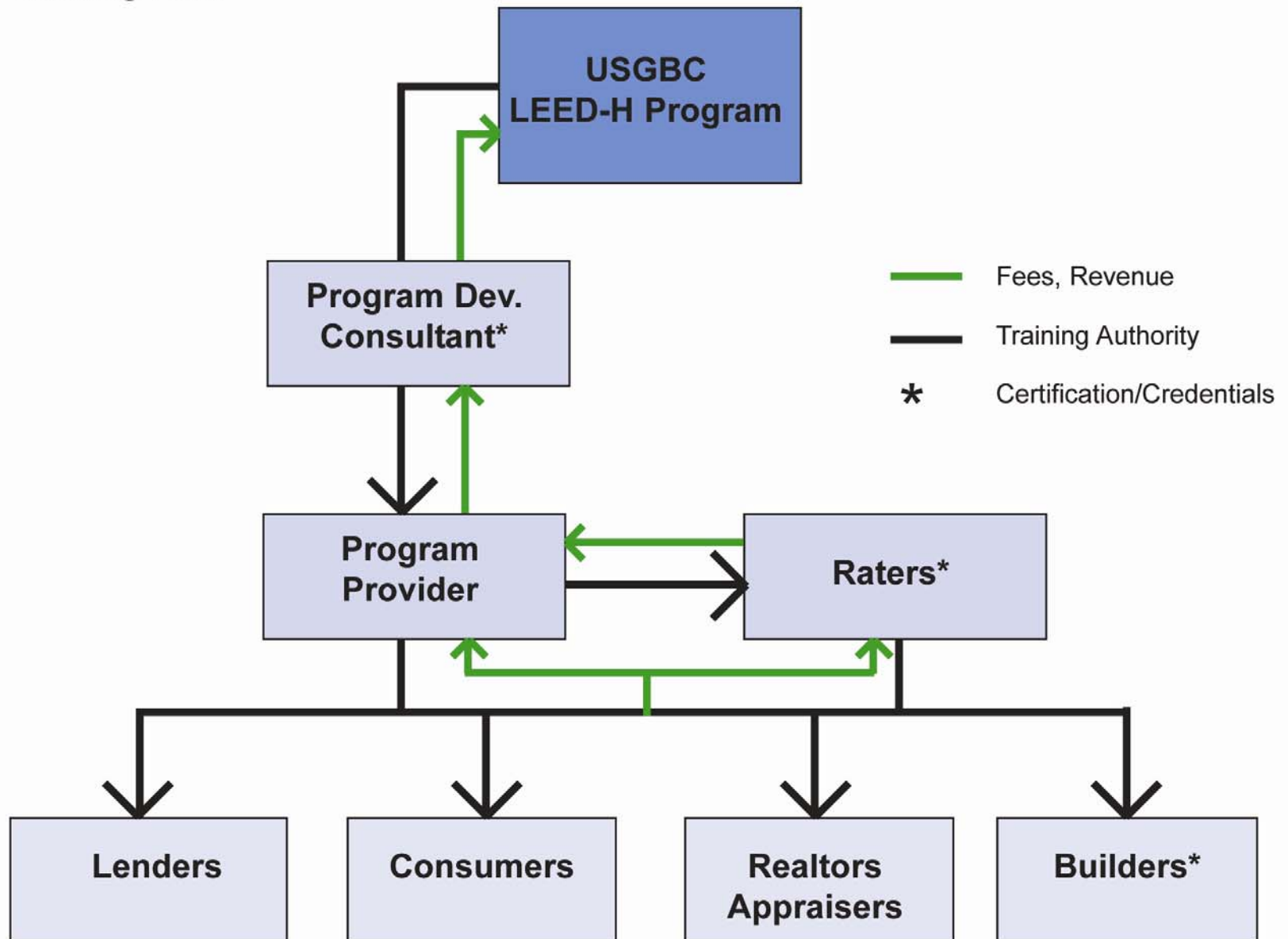
Raters

- Certified by Providers
- Details not yet defined, but could be:
 - Second tier certification above HERS rater
 - Supplemental service after HERS rating for builders
- Trained by USGBC accredited faculty
 - Could be Provider or other trainers

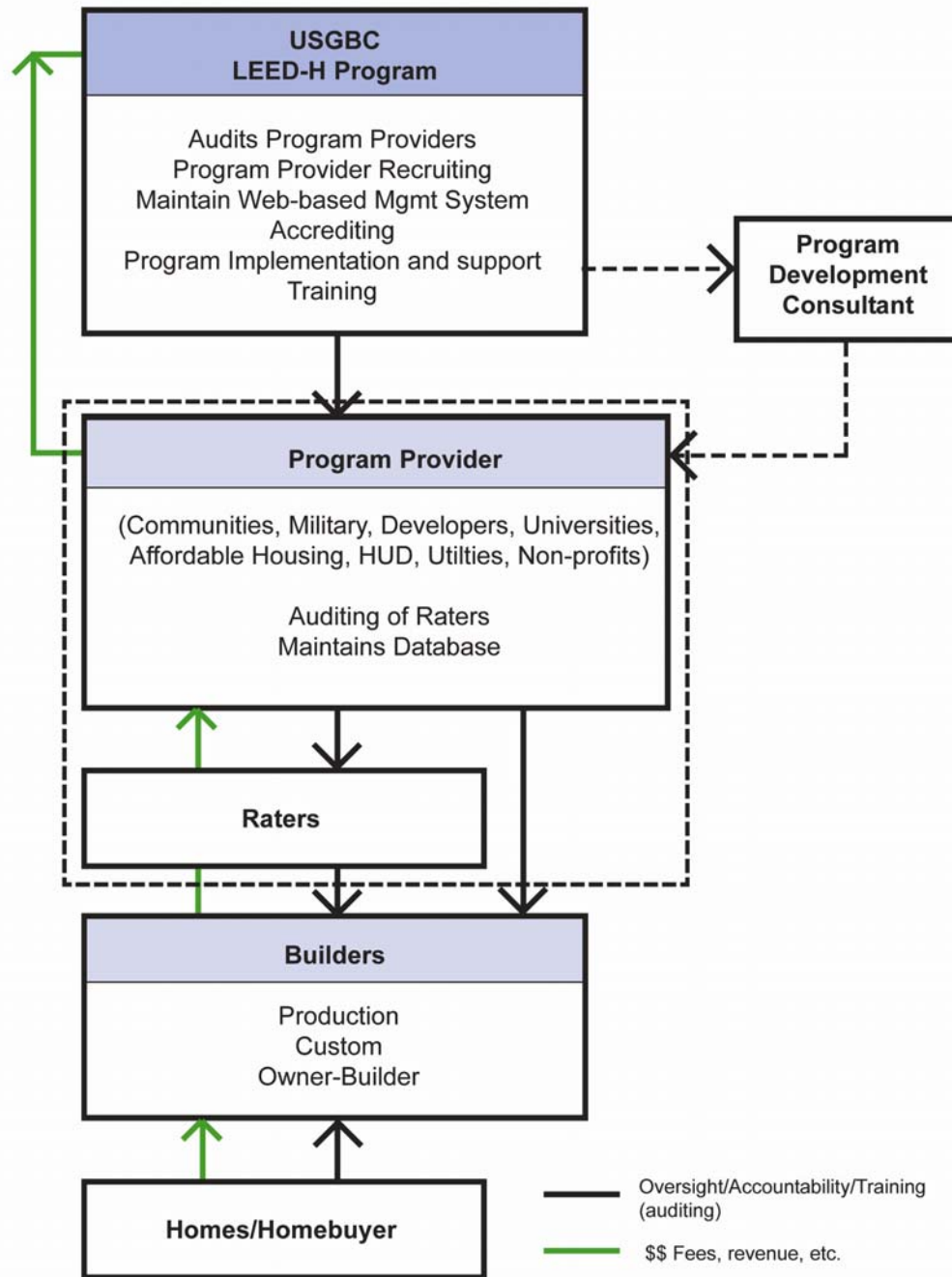
Program Development Consultant

- USGBC Accredited
- Program Assistance
 - Setting up new LEED-H Program by interested Provider
 - Support materials and information
- Train-the-trainers for Providers

Training Flow



LEED Home Flow



Questions, Answers & Discussion

And Where We're Headed

- **Take it away, Richard ...**