

Green Building Retrofitting Trends and Certification Requirements

City of Milwaukee
Emerging Business Sustainable Conference

presented by

Carter Dedolph

Focus on Energy

Erick Shambarger

*City of Milwaukee
Office of Environmental
Sustainability*

Ada Duffy

*Milwaukee Lead/Asbestos
Information Center*

Workshop Purpose

- Explain new business opportunities in the green building market, including existing Focus on Energy programs and the new city-scale energy retrofit program called *ME²*.
- Describe what certifications are necessary for contractors to participate in these programs
- Describe how certifications can be obtained

What is Focus on Energy?

- Wisconsin's statewide resource for energy efficiency and renewable energy
- Legislature created the program in 1999; expanded in 2005
- Helps implement projects that would not occur otherwise
- Customer eligibility based on their electric and/or natural gas utilities

Focus on Energy Offers...

- Residential, Business and Renewable Energy Programs
 - Single and multifamily homes
 - Commercial, industrial, agricultural and school/government buildings
- Education, technical expertise and financial assistance

Focus Accomplishments

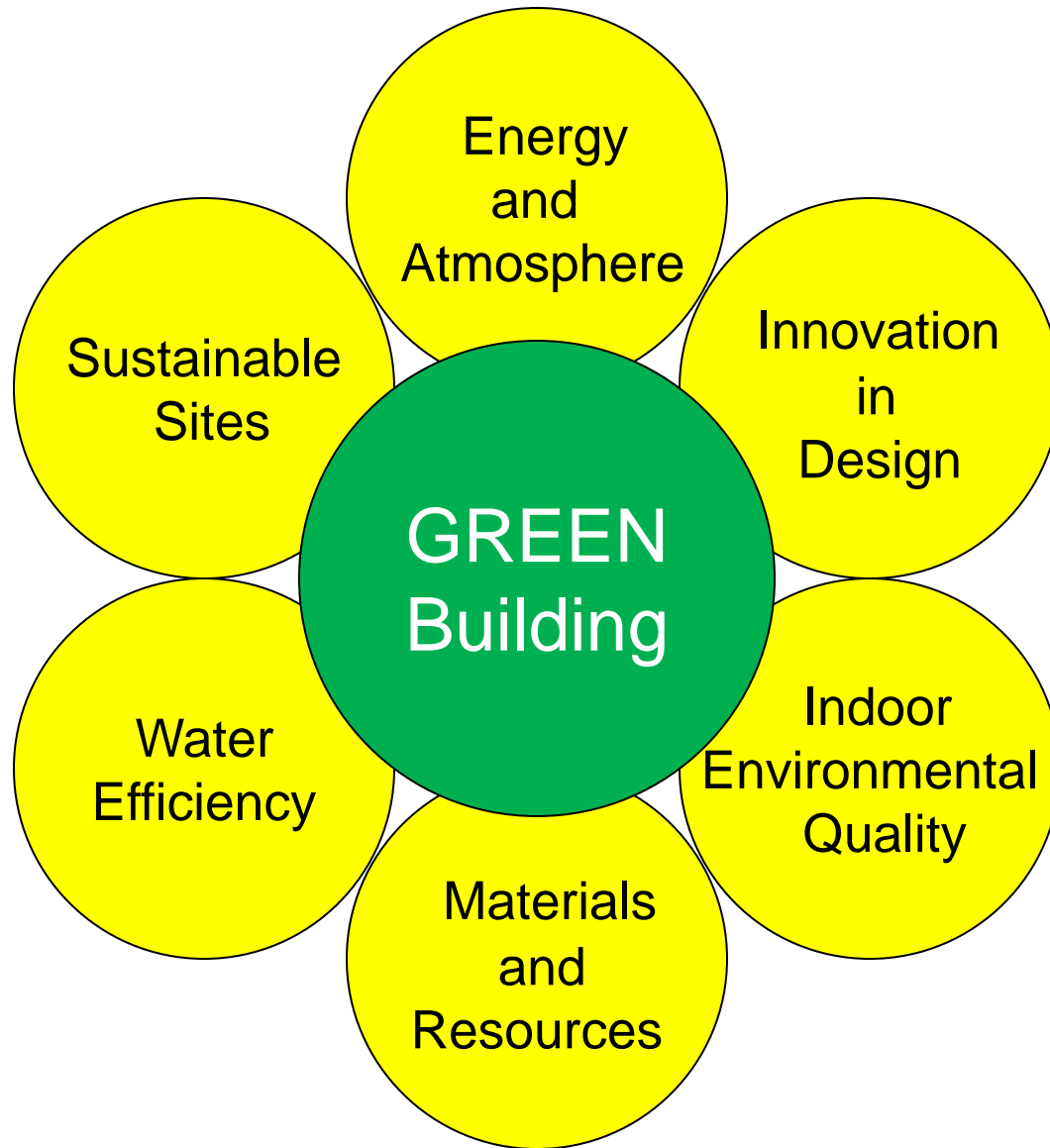
- Over 85,000 businesses and over 1.3 million residents have already participated in Focus on Energy
- More than 3,000 market provider partnerships statewide
- By mid-2009, Wisconsin's residents and businesses were saving more than \$268 million *annually* as a result of Focus on Energy programs

Agenda

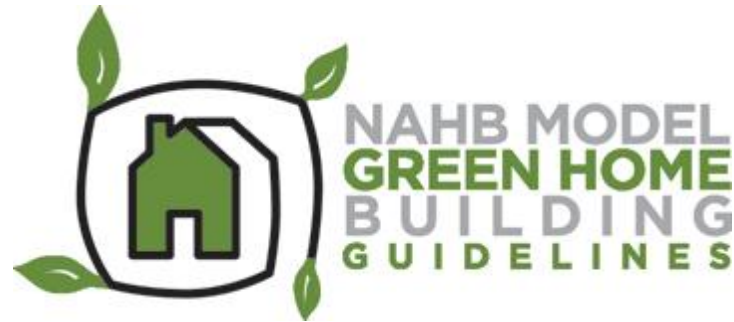
- Green Building
- Home Performance with ENERGY STAR
 - Focus on Energy's Existing Home Program
- Retrofitting Trends
- ME² Program
- Certifications and Training Opportunities

What is a Green Building?



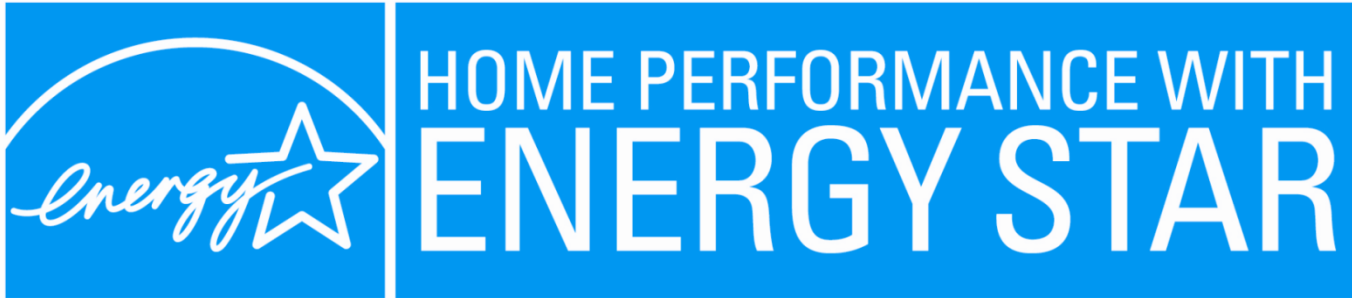


Many Different Programs



Existing Homes







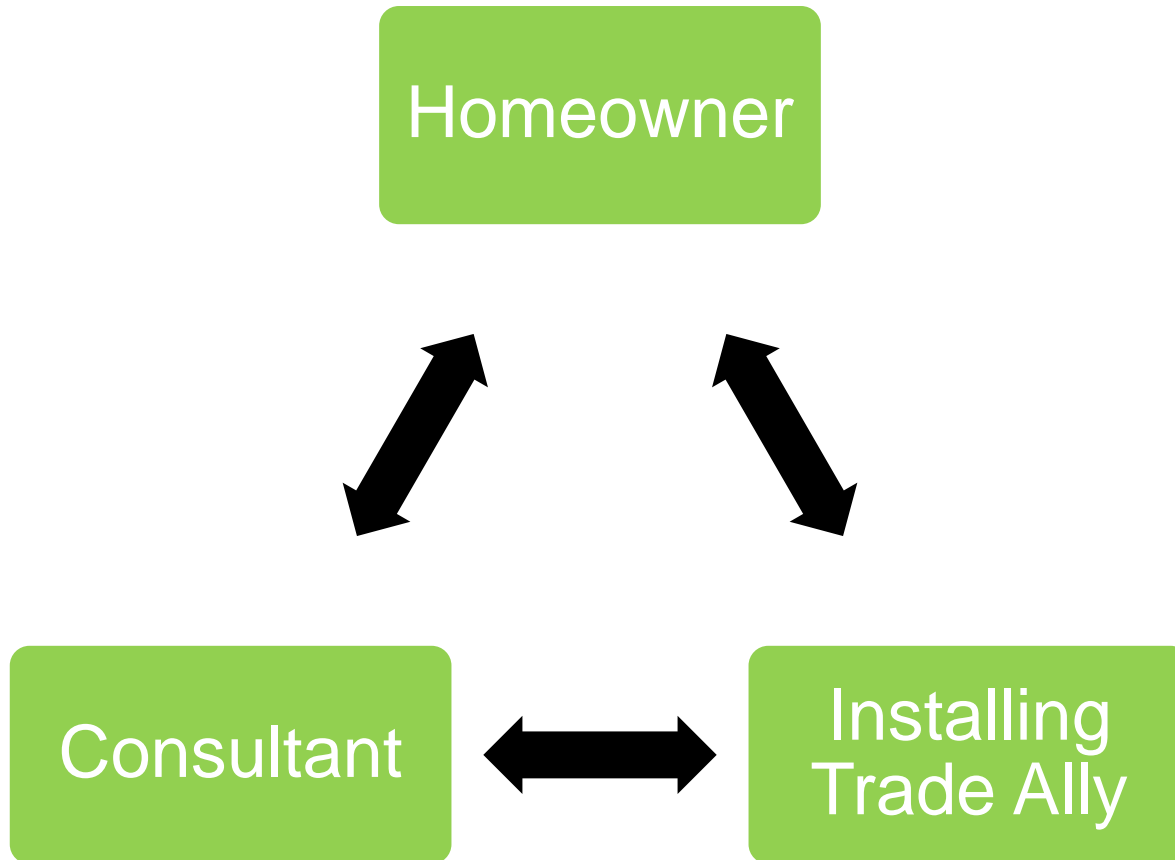
Home Performance with ENERGY STAR Nationally

- 24,000 Home Performance with ENERGY STAR projects nationally
- Over 30 utilities, state energy offices, public benefit programs, non-profits, and contractors
- Programs are at regional, state, and local levels

Home Performance with ENERGY STAR Wisconsin

- 1,950 Home Performance with ENERGY STAR completed projects in 2009
- 55% post assessments/pre assessments
- 75% completions implemented 3 or more measures

Participants



Consumer Program Participation Paths



Consultants

- Independent businesses
 - Offer a variety of options above and beyond Program's required assessments
- Work for the homeowner as compared to a contractor
- Third party recommendations on the measures a homeowner needs
- Perform a full energy evaluation of your home
 - Includes performance testing of ventilation and mechanical systems, combustion safety testing, building tightness, and insulation levels

Consultants

- Provide a written report outlining suggested changes and help determine next steps
- Will suggest Trade Allies that do the work to the Program's standards
- After the work is complete, consultant returns to provide independent verification the work was done correctly and re-test for combustion equipment if necessary

Cash-Back Rewards



Home Performance with ENERGY STAR® Cash-Back Reward Eligibility Summary January 1, 2010 to December 31, 2010

Cash-Back Rewards apply to single family, 1-3 unit rental building, or townhome (per individual unit structures). All Cash-Back Rewards are based on receipt of information from a partnering Consultant or Qualified Contractor. Customers must meet eligibility requirements to qualify for Focus on Energy incentives. See page 3 for eligibility details or call Focus on Energy at 800.762.7077 for more information.

Home Performance with ENERGY STAR Measure	Technical and Eligibility Criteria <i>Refer to Instructions and Descriptions section for additional information</i>	Reward Amount (Per Home)	Fuel Source Requirement			
			Electric Heat*	Gas Heat	LP/Oil/Wood	Federal Tax Credit
BUILDING SHELL	Air Sealing – 400 cfm reduction	Reduce by 400 cfm or 25% of pre-test	\$75	X	X	X
	Air Sealing – 1000 cfm reduction	Reduce by 1000 cfm	\$125	X	X	X
	Air Sealing – 1600 cfm reduction	Reduce by 1600 cfm	\$175	X	X	X
	Attic Insulation	Install to recommended R value	\$100	X	X	X
	Floor Insulation	25 sq. ft. minimum	\$75	X	X	X
	Foundation - Exterior Insulation	Rigid extruded polystyrene	\$150	X	X	X
	Foundation - Interior Insulation	Rigid extruded polystyrene fiberglass, or spray foam	\$200	X	X	X
	Knee-wall Insulation	Knee-wall	\$100	X	X	X
	Sidewall - Cavity Insulation	Closed or open	\$200	X	X	X
	Sidewall - Foam Insulation R3 – R4	700 sq. ft. minimum	\$100	X	X	X
	Sidewall - Foam Insulation R5 or greater	700 sq. ft. minimum	\$150	X	X	X
	Sill Box Insulation	Must be air sealed prior to insulation installed	\$50	X	X	X
ADDITIONAL REWARDS	Completion Reward	3 recommended complete shell insulation measures in addition to air sealing if applicable	\$300	X	X	
	Completion – LP/Oil/Wood Reward	3 recommended complete shell insulation measures in addition to air sealing if applicable - Customer receives no Rewards for the actual measures	\$300			X
	New Customer Referral	Referral customer must complete a post blower door test	\$50	X	X	X

<http://www.focusonenergy.com>

Consultant Selection

- Building science experience
- Business experience
- Verbal and written communication skills
- Computer skills
- Customer service skills
- Application process

Consultant Program Training

- Two week classroom and field training by Program Staff
 - 2 trainings per year
 - 10 – 12 candidates per training
- RESNET Home Energy Rater certification
- BPI Building Analyst certification
- Mentoring in the field by Program Staff for first 3-5 projects

Consultants – After Training

- Program expectations and protocols
 - Signed agreement for participation
- Quarterly meetings
- Tech exchanges
- CEU requirements
- Homeowner surveys after completion
- Program QA/QC for a certain number of jobs

Consultant Services

- Primary focus is on building shell to deliver whole-house building performance
- Service includes pre and post evaluations
 - Blower door
 - Diagnostics
 - Combustion safety
- Delivered for fee



Trade Allies

- Installing Trade Allies - contractors
 - Installs reward measures
 - Requires Retrofit Clinic
- Referring Trade Allies
 - Does not install reward measures
 - Requires Introductory Webinar
- Both types of Trade Allies
 - Partner with a Consultant
 - Eligible for coop marketing \$

Trends


HOME PAGE TODAY'S PAPER VIDEO MOST POPULAR TIMES TOPICS Get Home Delivery in Chicago | Log In | Register Now

The New York Times Search All NYTimes.com
Tuesday, May 18, 2010 Environment

WORLD U.S. N.Y./REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL JOBS REAL ESTATE

[AUTOS](#)

ENVIRONMENT SPACE & COSMOS



Green

A Blog About Energy and the Environment

December 15, 2009, 12:28 PM

Obama Promotes Insulation as 'Sexy'

By KATE GALBRAITH

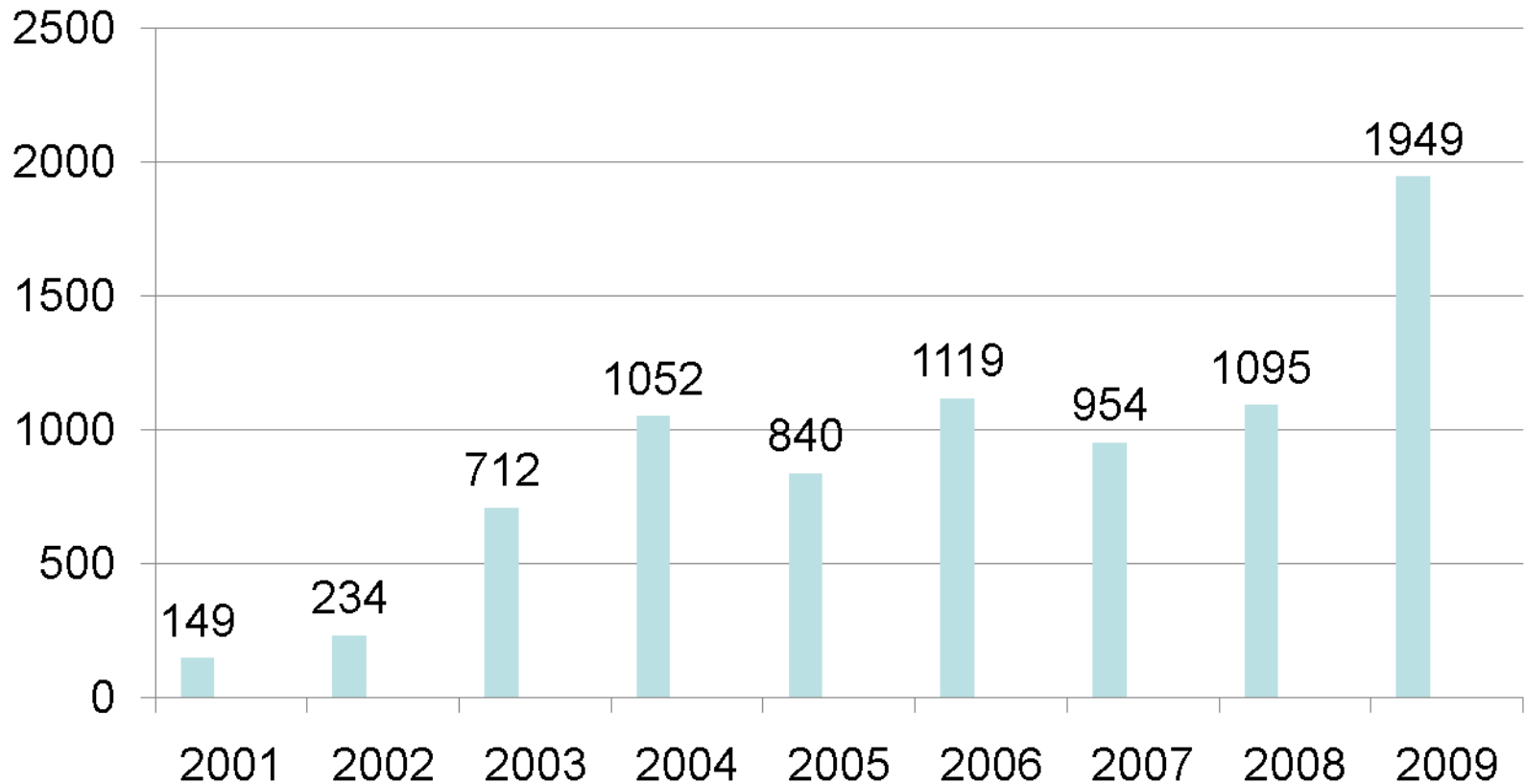


Stephen Crowley/The New York Times

President Barack Obama discussed the economic impact of energy saving home retrofits on Tuesday in a meeting with labor, manufacturing and small business leaders at a Home Depot in Alexandria, Va.

Promoting [one of his favorite themes](#) – weatherization – President Obama told a business audience at a Home Depot in northern Virginia

Completion History



Milwaukee Energy Efficiency Program (ME2)

- Cities of Milwaukee, Madison, and Racine were awarded \$20 million from the federal government to launch a \$100 million community-wide retrofit program
- Program will follow Focus on Energy Home Performance with ENERGY STAR protocol
- ME2 will provide an innovative loan program to homeowners to finance energy retrofit work
- ME2 will coordinate a large scale marketing campaign for energy efficiency



Certified Contractors

- Wisconsin Energy Conservation Corporation will issue RFQ for certified contractors for ME²
 - Qualifications will require Community Workforce Agreement provisions
 - Contractor must be licensed, bonded, and insured
 - Focus on Energy technical qualifications (to follow)
 - EPA lead abate rules
 - Waste disposal guidelines
 - Register as a Focus on Energy Trade Ally
 - Not disbarred by State and Federal authorities



Community Workforce Agreement Provisions

- Implement a Community Workforce Agreement for trades work in ME2
 - Davis-Bacon (prevailing) wages
 - Workers as employees of the contractor
 - OSHA safety training
 - 40% utilization of Residence Preference Program Workers
 - Utilization of apprentices and on-the-job trainees per DWD standards.
 - New hires from qualified training programs
- Coordination with Pathways Out of Poverty grant and workforce development partners to provide qualified workers



Certifications

Individuals



Homes



Companies







Building Analyst Professional

- BPI Certified Professional
- Building science (Fundamentals)
- Buildings and their systems
- Measurement and verification of building performance
- BPI National Standards and Project Standards
- Analyzing building systems



Envelope Professional

- Building science (Intermediate)
- Envelope and their interaction with other building systems
- Measurement and verification of building performance
- BPI National Standards and Project Standards
- Optimizing building envelopes and their interaction with building systems



Air Sealing Installer
Dense – Pack Insulation Installer
Air Sealing Crew Chief
Dense – Pack Insulation Crew

- Proposed certifications for professionals
- Review and comment phase
- Response to national Home Star legislation



Accredited Organization

- BPI Accredited organization
- An entity that complies with the requirements set by BPI to enhance the delivery of consistent, quality focused building performance services

RESNET[®]

CERTIFIED ENERGY AUDITORS/RATERS AND
QUALIFIED CONTRACTORS/BUILDERS

Residential Energy Services Network



focus on energy™

The power is within you.

RESNET[®]

CERTIFIED ENERGY AUDITORS/RATERS AND
QUALIFIED CONTRACTORS/BUILDERS

Residential Energy Services Network

- Home Energy Rater
 - A person trained and certified by a rating Provider to perform the functions of inspecting and analyzing a home to evaluate the minimum rated features and prepare an energy efficiency rating
 - Modeling REM/Rate or approved software
 - Rating for the home using HERS Index

Trainings

Wisconsin Energy Conservation Corporation

- Consultant Training Fall 2010 in Milwaukee
- BPI Installer certifications when available

Questions?

Thank You!

Carter Dedolph

Senior Program Manager

Home Performance with ENERGY STAR

Wisconsin ENERGY STAR Homes

608.249.1271 ext 315

carterd@weccusa.org

Erick Shambarger

City of Milwaukee

Office of Environmental Sustainability

414-286-8556

eshamb@milwaukee.gov

Ada Duffy

Milwaukee Lead/Asbestos

Information Center, Inc

414-481-9070

ada@mlic.com