



TRAIN

BUILD

GREEN

CAREERS



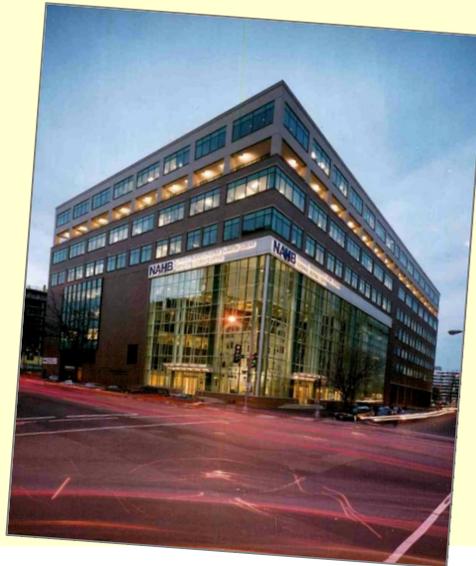
## ***Green Building/Jobs 101*** ***Presented by***

***Dennis O. Torbett, Vice President, HBI***  
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## National Association of Home Builders (NAHB)

- Represents 200,000 plus members
- 850 local and state affiliates (HBAs)
- HBI, the workforce development arm



## Home Builders Institute

- Three divisions:
  - Workforce Training and Employment
  - Job Corps
  - Residential Construction Academy (RCA)
- Training Job Corps youth and others since 1974
- More than 2,500 placements annually
- PACT – industry validated and recognized by DOL

## HBI implements programs that . . .

- Respond to labor market needs of home building industry
- Provide individuals with the skills to build a career and better life
- Support HBA efforts to connect with local communities
- Incorporate practices that reduce/eliminate adverse environmental impacts.

## What is Green Building?

The design and construction of buildings giving careful consideration to three main elements:

- Healthy indoor environment
- Maximum energy efficiency
- Conservative, thoughtful use of resources

(Source: Webster's Dictionary)



## The Five Main Areas of Green Building...

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality

(Source: New York State Energy Research & Development Authority)





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## NAHB Guiding Principles to Green Home Building

- Lot design, preparation and development
- Resource efficiency
- Energy efficiency
- Water efficiency
- Indoor environmental quality
- Operation, maintenance and home owner education
- Site planning and land development



## Benefits of Green Building/Going Green...

- Energy Efficiency
  - Saves on utility bills and operating costs
  - Enhances resale and lease value of real estate
- Environmental Efficiency
  - Reduces waste and disposal costs
  - Reduces water usage
  - Encourages recycling and reuse of materials
- Human Efficiency
  - produces healthier places to live and work
  - creates positive public perception and community goodwill

(Source: U.S. Green Building Council)



## Green Building Examples in the U.S.A...

### ➤ Empire State Building Going Green

- \$20M makeover
- Replacing 6,500 windows to reduce summer heat load and winter heat loss.
- Cut energy use by 38 percent,
- Saving \$4.4 million a year in energy costs.
- Tenants will be given individualized Web-based power usage systems so that energy can be more efficiently managed.

(Source: The Associated Press)

## Green Building Examples in the U.S.A.Continued...

- **Bank of America Tower in NYC Going Green**
  - Passive solar design for heating/cooling
  - Use of greywater
  - Green roofs that deflect heat
  - Climatically controlled workstations
  - Will be the USA's first LEED (Leadership Efficiency in Energy Design) platinum-certified green skyscraper

(Source: [www.wallstreetandtech.com](http://www.wallstreetandtech.com))

## Green Home Building

- 1996 - Denver HBA -1<sup>st</sup> private sector Green Building Program
- At same time City of Boulder made sustainable building practices part of city code.
- 2005 – NAHB developed “Green Home Building Guidelines”
- 2008 – NAHB issued National Green Building Standard
- 2009 – The NAHB Standard – 1<sup>st</sup> American National Standard for Industry (ANSI) for green building in the country.



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**Green is no longer on the fringe....**

**Green is about green....\$\$\$**



## American Recovery and Reinvestment Act

- \$186B for green-related programs – 24%
- Repair/retrofit public housing
- Weatherization of modest income homes
- Neighborhood stabilization
- Modernization of public housing
- Summer youth employment
- Represents 1000s in green, energy efficiency and environmental services jobs



## The Green Jobs Act of 2007

- Part of the Energy Bill
- Job training for 35,000 people a year to work in the green building industry
- \$125 million yearly for green job training programs all over the USA.



## What is a Green Job?

➤ According to U.S. VP Joe Biden, “there is no widely-accepted definition of what constitutes a green job.”

➤ The United Nations Environmental Programme (UNEP) defines green jobs as:

*“Positions in agriculture, manufacturing, construction, installation, and maintenance that contribute to preserving or restoring environmental quality.”*

(Sources: Staff report on Green Jobs: A Pathway to a Strong Middle Class and [www.unep.org](http://www.unep.org))

## What is a Green Job?-Continued...

- Green for All, defines a “green-collar” job as:  
*“a job that preserves and enhances environmental quality , while also helping people and the economy.”*
- Van Jones, President, Green For All appointed President Obama’s “Green Czar”.

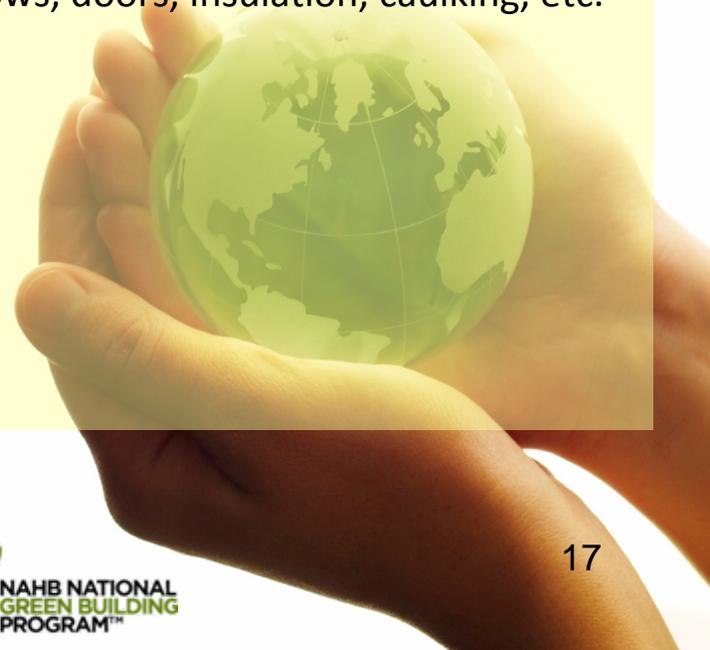
(Source: [www.greenforall.com](http://www.greenforall.com))



## Green Jobs/Careers-Continued...

- **Green Electricians, Carpenters, Plumbers, etc.**
- **Facilities Maintenance Technicians** – maintains industrial, commercial, residential properties
- **Green Product Designer** -- designs products that use less energy and are eco-friendly
- **Energy Rating Auditor** -- performs a comprehensive analysis of a building's energy efficiency
- **Energy Retrofitter** – creates more efficient home heating/cooling systems
- **Solar Installer/Maintenance** – installs/maintains solar collection systems
- **Weatherization Specialists** – installs/retrofits windows, doors, insulation, caulking, etc.

(Source: [www.greenforall.com](http://www.greenforall.com))



## Green Jobs/Careers-Continued...

- **Construction Mgmt. and Engineers**
- **Urban Arborist** -- a landscaper or greenskeeper with an understanding of conservation and renewable resources
- **Environmental Manager** -- coordinates management of an organization's environmental performance to protect and conserve natural resources
- **Green Maintenance Supervisor** – implements and oversees green activities

(Source: [www.greenforall.com](http://www.greenforall.com))



## Green Jobs' Facts & Statistics...

- Renewable energy generates more jobs than employment in fossil fuels
- Projected investments of \$630 billion by 2030 will translate into at least 20 million additional jobs in the renewable energy sector
- In the US alone, the environmental industry in 2005 generated more than 5.3 million jobs



## Green Jobs' Facts & Statistics-Continued...

- The Energy Tax Credit is expected to generate \$6 billion in remodeling work by 2010.
- Green jobs pay 10 to 20% more than other jobs

(Source: Staff report on Green Jobs: A Pathway to a Strong Middle Class)



## How NAHB is Greening the Workforce...

- The National Green Building Standard was approved on Jan 29<sup>th</sup> by the American National Standards Institute (ANSI)
- Currently the first and only green building rating system approved by ANSI
- The standard allows home builders & buyers to make green choices based on climate and geography
- Defines what green practices can be implemented into construction

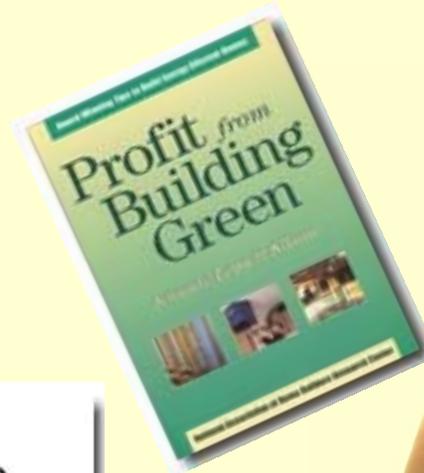
(Source: NBN & The National Green Building Standard )

## How NAHB is Greening the Workforce-Continued...

- The NAHB National Green Building Conference
  - May 8<sup>th</sup> – 10<sup>th</sup> in Dallas, Texas
  - Will offer green business management courses
  - Courses include: Green Project Management, Green Building Legal & Liability Issues, Valuing Green Homes, Prepackaged Green Solutions and Systems for Community Living

## How NAHB is Greening the Workforce-Continued...

### ➤ NAHB's Green Products & Programs



[www.nahb.org/CGPinfo](http://www.nahb.org/CGPinfo)



## How HBI is Greening the Workforce...

- Green Workforce Development Consortium Member
- Aligning training programs and text books with the National Green Building Standard
- Revisions to existing Training Achievement Records (TARs) to include green practices
- Revisions to Pre-Apprenticeship Certificate Training (PACT) to include green techniques and module

## How HBI is Greening the Workforce-Continued...

- 200 craft programs employ green practices
- New green specialty areas of study in carpentry—Exterior Finish and Weatherization
- Re-establish Solar Technician training
- A Green textbook and teaching aids will be created by 2011



## How HBI is Greening the Workforce-Continued...

- Developing green textbook and teaching materials with Delmar-Cengage Learning
- Participating in White House Council of Environmental Quality (CEQ) meeting
- Creating a Green Building Designation to assist managers and superintendents



# QUESTIONS?

