LEED and Federal Buildings

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August 17, 2010

IMPACTS OF U.S. BUILDINGS ON RESOURCES

40% primary energy use*

72% electricity consumption*

39% CO_2 emissions*

13.6% potable water consumption**

Sources:
*Environmental Information Administration (2008). EIA Annual Energy Outlook.
** U.S. Geological Survey (2000). 2000 data.

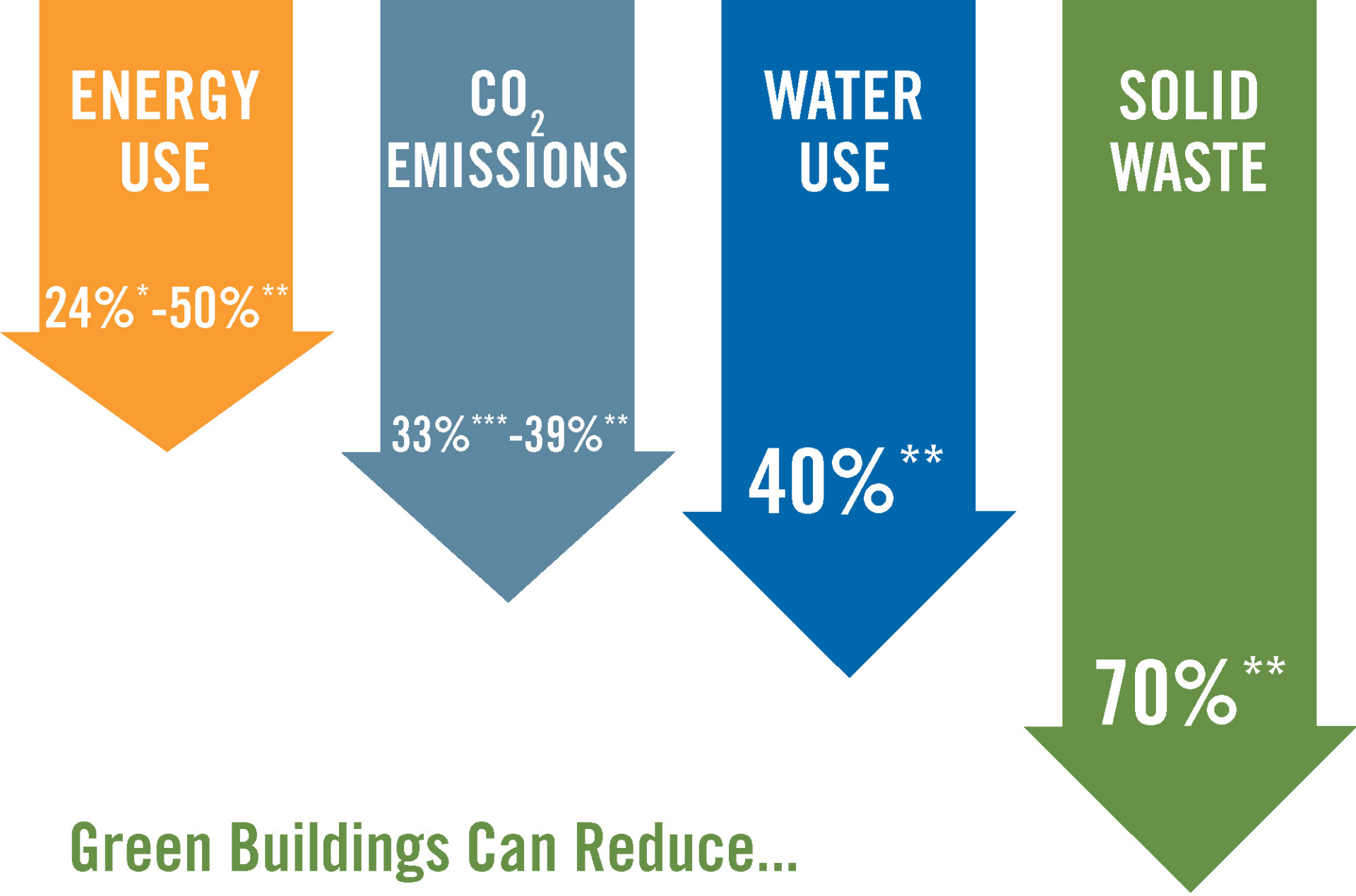
Global CO_2 Emissions by Sector

#1. Buildings

#2. Transportation

#3. Industry

Source: Energy Information Administration (2006). Emissions of Greenhouse Gases in the United States.



Green Buildings Can Reduce...

* Turner, C. & Frankel, M. (2008). Energy performance of LEED for New Construction buildings: Final report.
** Kats, G. (2003). The Costs and Financial Benefits of Green Building: A Report to California's Sustainable Building Task Force.
*** GSA Public Buildings Service (2008). Assessing green building performance: A post occupancy evaluation of 12 GSA buildings.

STEWARDS
market
transformation
PROVIDES
tools and
expertise
U.S. GREEN BUILDING COUNCIL
USGBC
EDUCATES
the industry
and the public
BUILDS
community
FORUMS
for industry
dialog

Architects
Product Manufacturers
Federal, Local, and State Governments
Building Owners
Non Profit Leaders
Planners
U.S. GREEN BUILDING COUNCIL
USGBC
Engineers
Financial Planners
Interior Designers
Landscape Architects
Building Tenants
Utility Managers
Property Managers
Code Officials

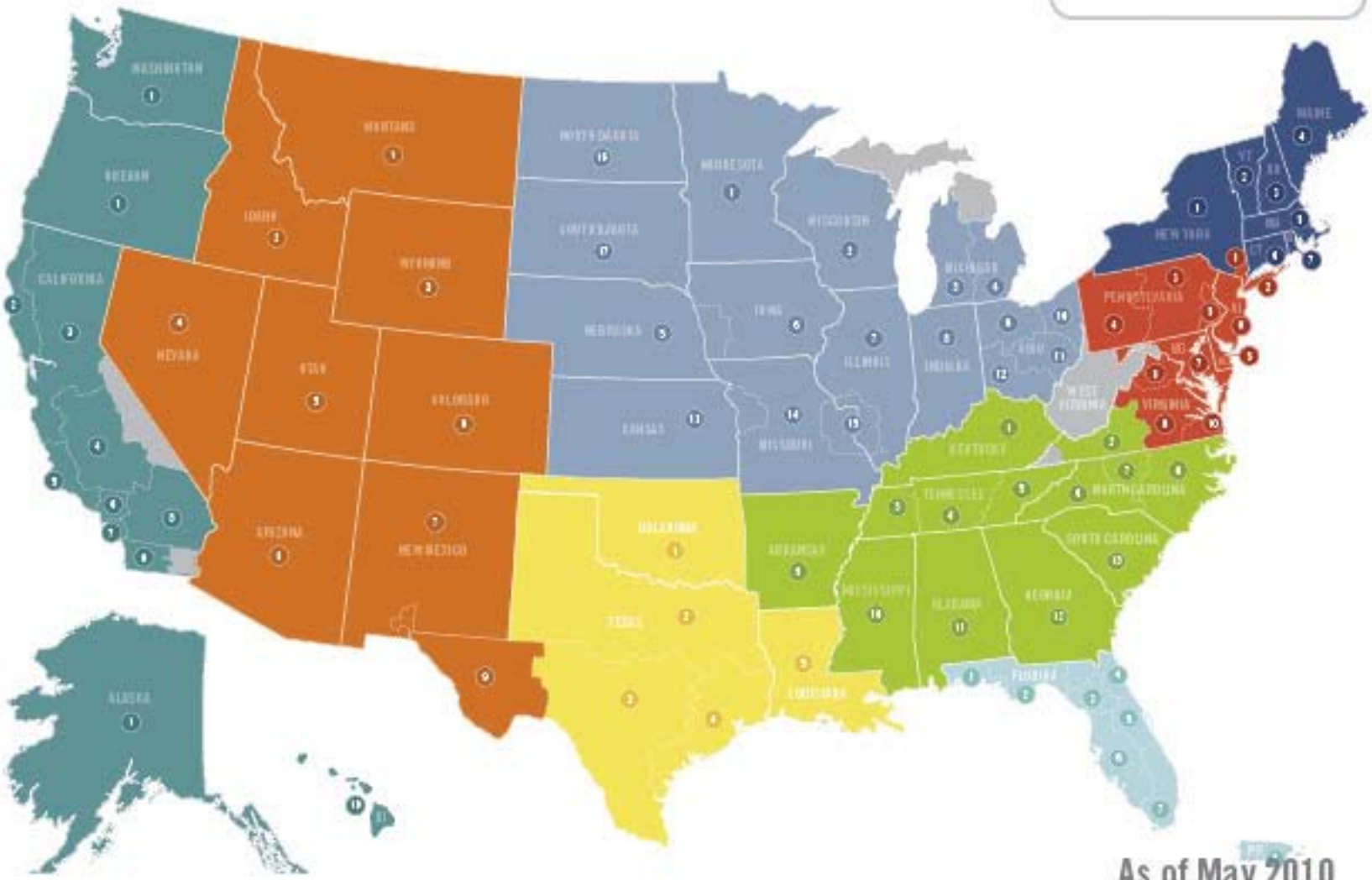
USGBC CHAPTERS

One community of individuals taking LOCAL action to deliver GLOBAL results through education, advocacy and outreach.

NETWORK

80
Chapters

30,000+
Individual Members



As of May 2010

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USGBC membership growth reflects the expansion of green buildings in the market.

*As of May 2010

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As of May 2010

Government accounts for 1/3 of all LEED Projects

The Federal government registered 1798 LEED projects in 2009 alone!

FEDERAL GOVERNMENT PROJECTS

221 LEED certified projects,
representing **27** million sf

3,349 registered projects,
representing **471** million sf

As of May 2010

14 federal agencies or departments

45 states

202 localities

As of May 2010

Photo by Opus Northwest

What Is Green Building?

PREDICTIONS IN GROWTH OF GREEN

Commercial: By 2010, approximately 10% (~$23 billion) of construction starts*

Corporate America: By 2009, 80% of corporate America expected to be engaged in green at least 16% of the time; 20% engaged 60% of the time**

Institutional: Dedication to green health care and educational facilities expected to increase dramatically over the next five years**

Sources:
* McGraw-Hill Construction, Green Building SmartMarket Report, 2006
** McGraw-Hill Construction, Greening of Corporate America SmartMarket Report, 2007
*** McGraw-Hill Construction, Education Green Building SmartMarket Report, 2007 and Health Care Green Building SmartMarket Report, 2007

Why the Demand?

- Unprecedented level of government initiatives
- Heightened residential demand for green construction
- Improvements in sustainable materials

Source: Facility Management Institute, 2008 U.S. Construction Overview

INVESTMENT RETURNS

LEED certified buildings tend to

Retain value
Sell at a faster rate
Have higher tenant occupancy

Real Estate companies investing in green are clearly benefiting.

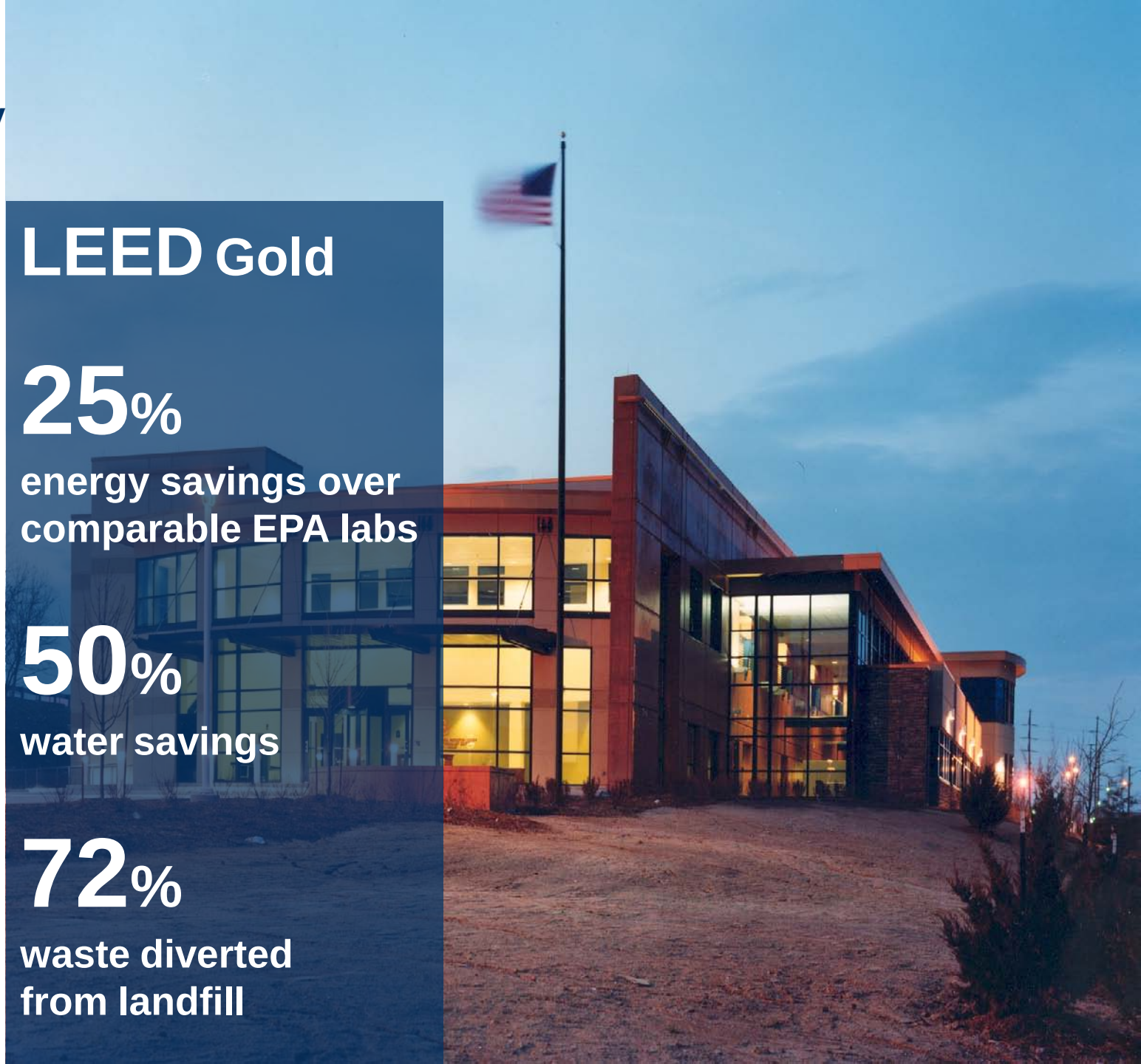
-Katherine Hammack,
Ernst & Young

Case Study

EPA Science and Technology Center

U.S Environmental Protection Agency
owner

Laboratory
72,000 sq ft



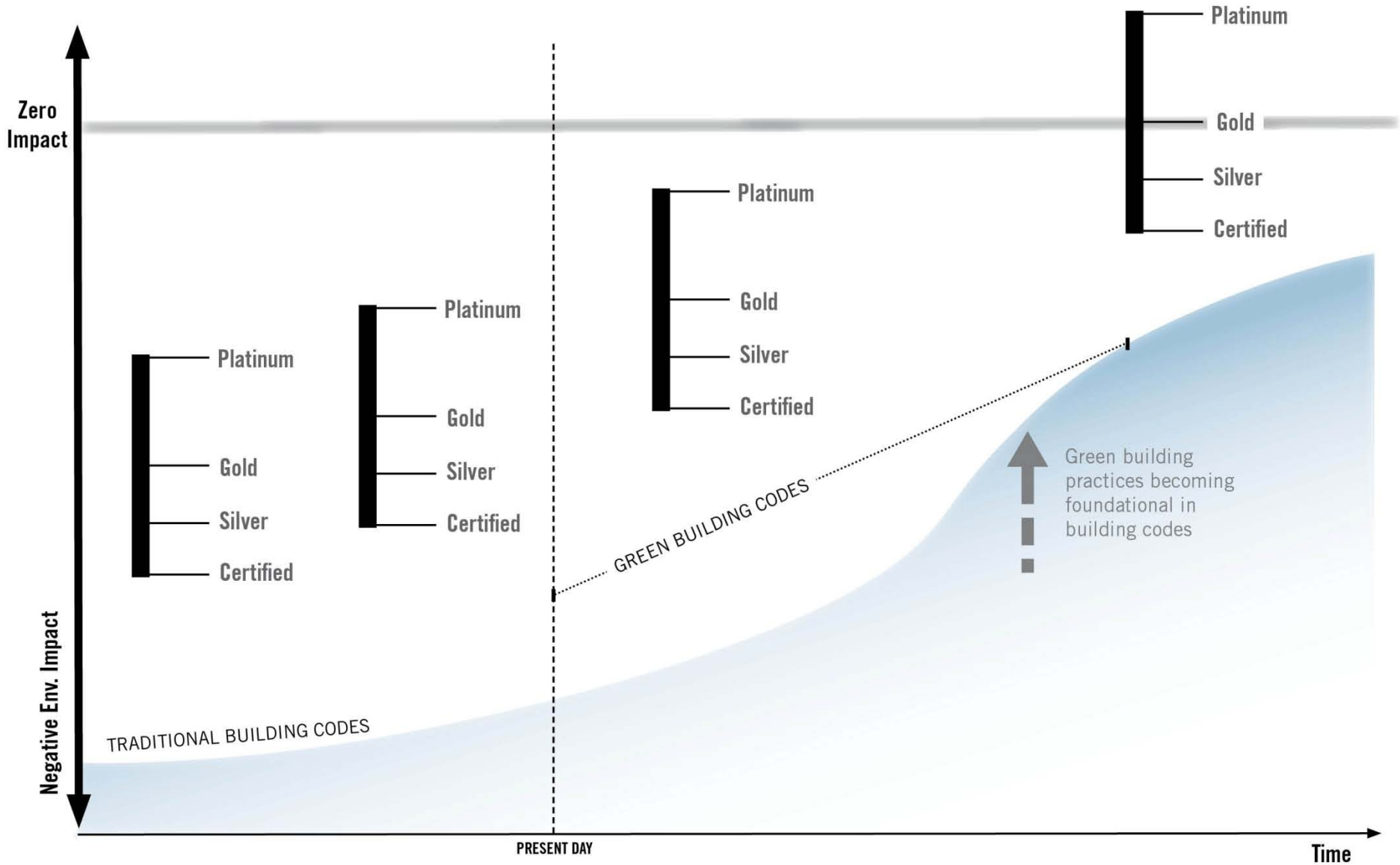
LEED Gold

25%
energy savings over comparable EPA labs

50%
water savings

72%
waste diverted from landfill

LEED and Green Building Codes

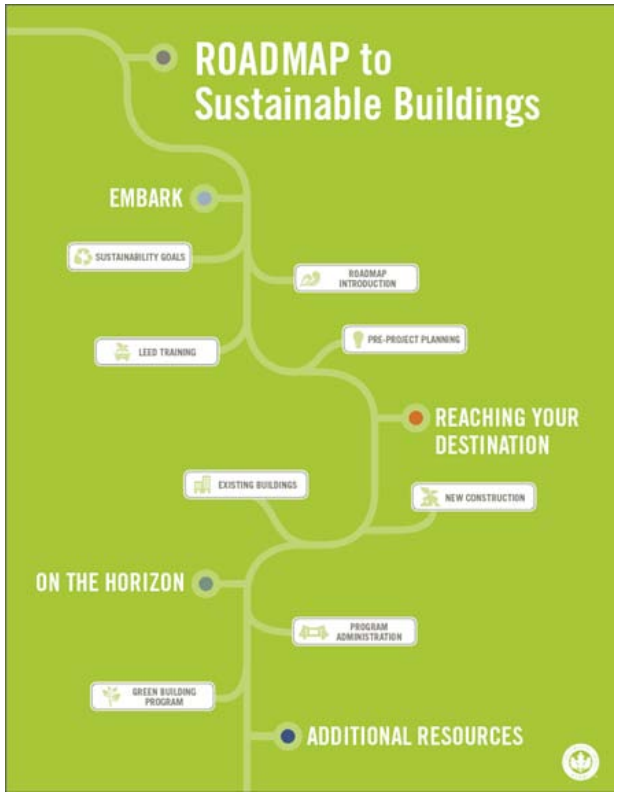


Featured Highlight

Green Economic Recovery Resources

Green building strategies, including energy efficiency, are a cornerstone of the plan to revitalize our economy. The following resources and best practices are intended to support state and local leadership and assist governments in these critical efforts.

Learn how »



LEED as a Tool for Performance Strategies

Building Modernization Project	LEED EB:O&M Credit or Prerequisite	Summary of Requirement
Energy Audit	EAp1: Energy Efficiency Best Management Practices	ASHRAE Level I, walk through analysis and opportunity assessment
Chiller, Boiler, HVAC, Lighting, or window replacement	EAc1: Optimize Energy Performance	ENERGY STAR Portfolio Manager score of 69 or higher
HVAC Retrofit	EQp1: Outdoor Air Introduction & Exhaust	Achieve ASHRAE 62.1-2007 ventilation rate
Retro-Commissioning	EAc2: Existing Building Commissioning	Develop and implement an ongoing commissioning plan. Implement low-cost and no-cost improvements.
Installation of System-level Meters or Building Automation System	WEc1, EAc3: Performance Measurement	Measure and track energy and/or water consumption at the building level or system level
Roof Replacement	SSc7.2: Heat Island Reduction	Install a vegetated roof or use high-albedo roofing materials
Plumbing Fixture Retrofit	WEp1 & WEc2: Indoor Plumbing Fixture and Fitting Efficiency	Achieve fixture efficiency at or beyond UPC 2006 or IPC 2006
Landscaping, Paving, or Grounds Upgrades	SSc5,6,7.1 & WEc3: Open Space, Stormwater, and Irrigation	Cover 25% of site with native vegetation; Infiltrate or collect 15% of precipitation; Use high-albedo materials for 50% of hardscape; Reduce use of potable water for irrigation
Facility Alteration or Addition	MRc3, 9 & EQc1.5: Sustainable Purchasing, Solid Waste Management, and IAQ Management	50% of materials purchased have content that is recycled, salvaged, locally sourced, rapidly renewable, and/or low VOC emitting; Divert 70% of waste from landfill; Implement SMACNA,1995 IAQ Guidelines

www.usgbc.org/government

WEBCAST SERIES
Stimulus Plan Implementation

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