

Leading by Example

- The Role of North American Governments in Promoting Green Building

The Hon. Tom Roper
Board Member, Climate Institute

GREX Sydney Australia,
June, 2007



Climate Institute

Discussion Points

- Green buildings address climate change
- Kyoto 'No' - green buildings 'Yes'
- Outside Washington green is action
- Dollars for Green
- Sustainable schools and hospitals
- UK leads
- Green makes 'cents'



USGBC Climate Change Action Plan

1. Require 50% CO2 reduction for all new commercial LEED projects
2. Increase energy reduction prerequisites in LEED
3. Initiate CO2 offset program based on LEED performance data
4. Provide free LEED for existing buildings registration for all projects certified under LEED for new construction and LEED for core and shell
5. Eliminate certification fees for all LEED platinum projects
6. Make USGBC 100% carbon neutral by end of 2007
7. Offer “portfolio performance” program for large landlords
8. Provide professional education curriculum on reducing CO2 emissions

Executive Order Jan, 2007



High performance and sustainable buildings memorandum

- Employ Integrated Design Principles – integrated design and commissioning
- Optimize Energy Performance
- Protect and Conserve Water – indoor and outdoor
- Enhance Indoor Environmental Quality – ventilation and thermal comfort, moisture control and daylighting
- Reduce Environmental Impact of Materials – recycled and biobased content, reduced construction waste and eliminate ozone depleting compounds



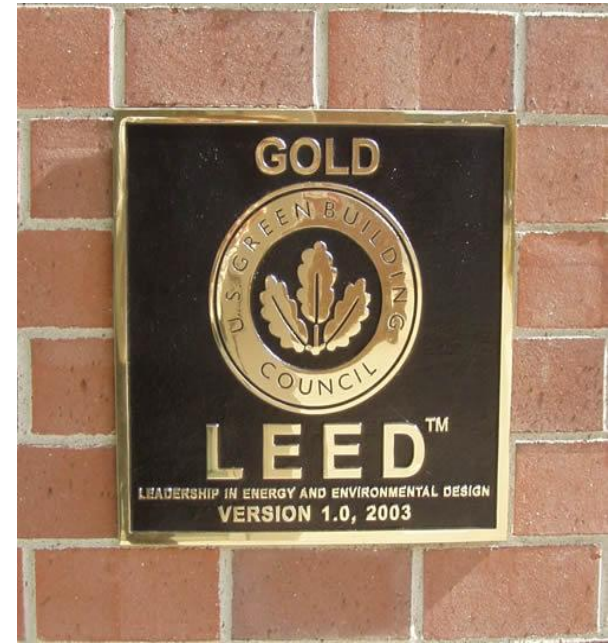
Department of the Army

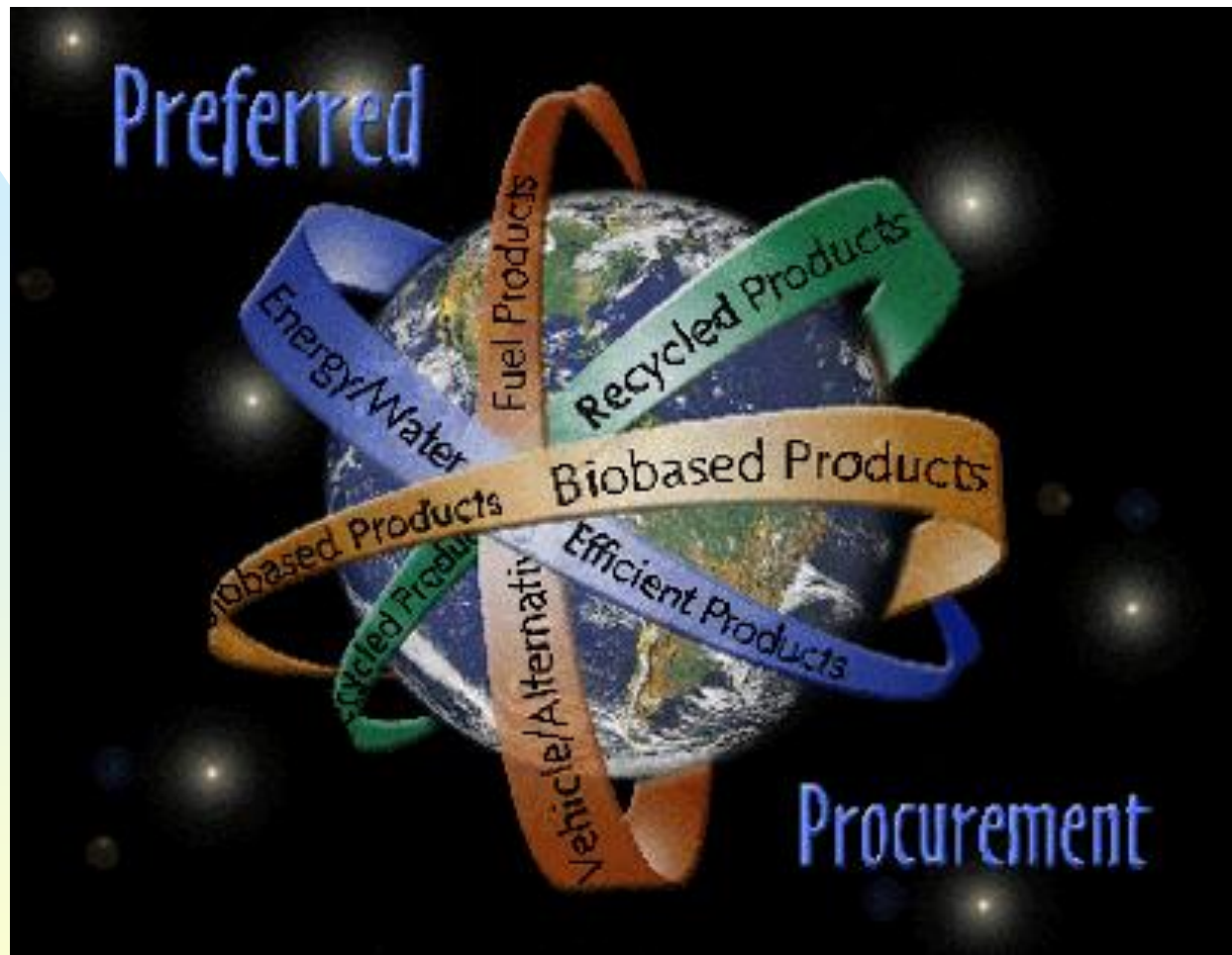
- All military building projects will achieve LEED Silver NC
- The Army will adopt LEED Homes for residential housing
- Continue to incorporate sustainability design and development practices into all facilities

Joseph Whitaker
Deputy Assistant Secretary of the Army

LEED Certified Federal Buildings

- 51 certified projects in 13 agencies, including 12 leased facilities – 6.4 million square feet
- 320 federal building projects registered for LEED
- 18 case studies in High Performance Buildings Database







Kansas City:
Kansas Science and
Technology Center

Omaha:
Carl T. Curtis Midwest
Regional Headquarters of
the National Park Service

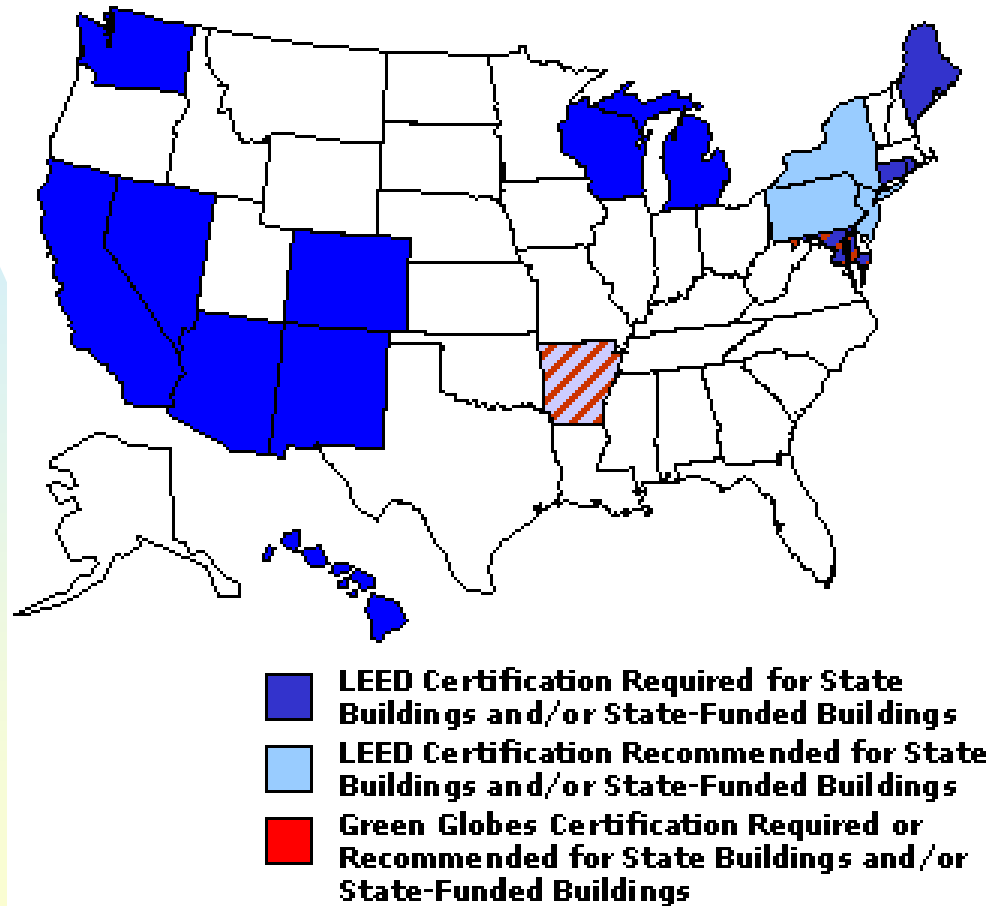


Eugene, Oregon:
Wayne L. Morse United States Courthouse



Rating:
US Green Building Council LEED-NC
Level: Gold (39 points)

Green Standards for State Buildings



Action Plan

- All new State buildings and major renovations of 10,000 square feet or over will be certified at LEED-NC Silver or higher (or LEED EB if applicable)
- Building projects less than 10,000 sq. ft. shall use the same design standard, but certification is not required;
- Each new building or large renovation project shall evaluate the merits of clean on-site power generation
- All existing State buildings over 50,000 sq. ft. shall meet LEED-EB standards by no later than 2015
- All State owned buildings will reduce the volume of energy purchased from the grid by at least 20% by 2015

California Green Building Initiative

- **250** state-owned buildings to benchmark their energy consumption by end of the year
- **250** buildings larger than 50,000 sq. ft. retro-commissioned to optimize existing energy systems and identify areas for improvement by 2009
- **50** existing state buildings are targeted for LEED EB certifications
- **35** new construction projects are going for LEED Silver or better certification
- **25** buildings are scheduled to begin the retro-commissioning process next year
- **20** % reduction in electricity usage in state facilities by 2015
- **7** state facilities are installing solar panels to provide 3.2 MW
- **6** state-owned buildings have achieved LEED NC certification

California EPA - Sacramento

- First LEED – EB Platinum building
- 26% more energy efficient than code
- 25% reduction in overall water use
- \$600,000 annual savings from green features
- Increase of \$12 million in asset value
- Less than 1 year payback



Washington State Mandates Green

“One of my hopes is that by showing the way, we will encourage everybody from mall developers to homebuilders to use the same green building techniques that schools and other government buildings will be using.”

Christine Gregoire
Washington Governor



Ben Franklin Elementary School
Photo Credit: Benjamin Benschneider

State Leaders

- **Arizona** – LEED or Green Globes certification recommended for state agencies
- **Hawaii** – certification required for construction or substantial renovation utilizing 50% or more in State Funds
- **Maryland** – LEED or Green Globes certification for all 5,000 sq. ft. plus capital projects
- **Michigan** – certification required for all state funded new construction or renovation projects over \$1m
- **Nevada** – LEED for all State funded buildings and tax abatements for LEED silver private developments

State Leaders

- **New Mexico** – certification required over 15,000 sq. ft.
- **New York** - A Green Building Tax Credit for commercial
- **Oregon** – 35% Business Energy Tax Credit for LEED
- **Washington** – LEED for all above 5,000 sq. ft., incl. schools
- **Washington DC** – District buildings this year, District funded 2008 and private buildings by 2012
- **Wisconsin** – LEED applies to all new and retrofit projects

It's Getting Easier to Be Green



Source: The New York Times Real Estate 13/06/06

The 2030 Challenge for Green Buildings - US Mayors Conference

- New City construction and renovation projects shall achieve a minimum delivered fossil-fuel energy consumption performance standard of half the US average for that building type
- All other new construction, renovation, repairs and replacement of City buildings shall employ cost-effective, energy efficient, green building practices to the maximum extent possible
- New buildings will become carbon neutral and use no fossil fuel GHG emitting energy by 2030

Implementation

- Adopt land use policies that reduce sprawl, preserve open space, encourage transit and create compact, walkable urban communities
- Increase the use of clean, alternative energy
- Make energy efficiency a priority through building code improvements and retrofitting facilities
- Reduce Municipal energy use
- Purchase only Energy Star equipment and appliances
- Encourage diversity in energy generation
- Practice and promote sustainable building practices using the USGBC's program or a similar system

A Menu of City, Country and Town Initiatives

- Fiscal – tax and property credits, abatements and exemptions; reduced or waived permit fees; energy and water charge rebates; grants for design planning and in some cases actual construction costs
- Mandating green requirements for new developments
- Density and height incentives
- Expedited permitting





November 15th, 2006 adopted a Local Law requiring that:

- Every applicant for the construction of a commercial, industrial or office building, a multiple residence of more than 4,000 sq. ft. shall provide a completed LEED checklist
- No Building Permit issued unless the proposed building will achieve enough points to attain LEED “certified” status
- No Certificate of Occupancy issued without having achieved sufficient points for LEED “certified” status
- Upon completion of construction and inspection, a fee will be paid to ensure successful LEED certification and refunded once achieved

Arlington County, Virginia

- Offers additional density and/or height for developments achieving LEED certification – from .15 FAR (floor area ratio) for a “certified” project to .35 FAR for a “Platinum” project and/or up to three additional stories
- Any developers who do not commit will contribute \$0.03 per sq. ft. to the Green Building Fund which is used to provide education and outreach





- Introduced new rules allowing greater development for LEED Silver, greater transferable development rights for downtown historic structures, the promotion of affordable housing and assistance for ‘green roofs’



Fisher Pavilion at Seattle Center

Chicago's Green Permit Program

Expedited 30 day permit process

The Ten Green Permit Menu Items are:

- Higher LEED or Energy Star Certification
- Green roofs
- Transit oriented or difficult to develop areas
- Renewable energy
- On site power generation
- Exceptional waste management
- Extra affordability
- Accessibility
- Natural ventilation
- Innovation.

Chicago



Budlong Woods Library



West Englewood Library



22nd District Police Station

Greening America's Education

Greg Katz "Greening America's Schools: Costs and Benefits"

- Costs little above traditional school (av. 1.65%)
- Energy savings 33.4%
- Water savings 32.1%
- Reduced teacher turnover and sick days
- Increased learning, productivity and performance; and
- Better health and reduced student asthma, colds, flu

Building green at an extra cost of \$3.00 per sq. ft. produced annual financial benefits of \$25

Sidwell Friends Middle School, Washington DC



Rating:

US Green Building Council LEED-NC

Level: Platinum (57 points)

“The Green Guide For Health Care”

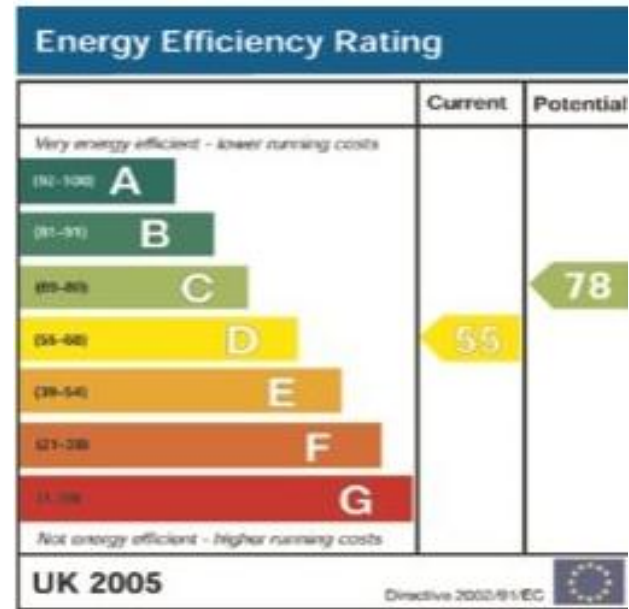
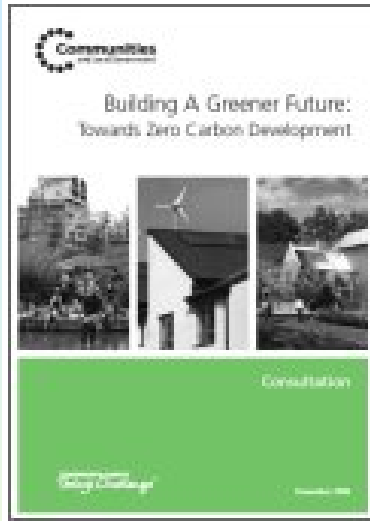
Lisa Fay Matthiessen, Davis Langdon;

- With an integrated design approach, green can be cost effective
- Cost/sq.ft. ranged from \$300 to \$600 with LEED ‘certified’ facilities being in the same range as the others
- Green costs are minor compared to other drivers



Dialysis Centre,
Wisconsin 28

United Kingdom Developments





Green Building is not only an
environmental necessity ...

It makes economic and social sense