What Every State Executive Should Know About Sustainable Buildings
“To site, design, deconstruct, renovate, operate, and maintain state buildings that are models of energy, water, and materials efficiency; while providing healthy, productive and comfortable indoor environments and long-term benefits to Californians”
Objective

To Raise Your Awareness About:

- What sustainable buildings are
- How sustainable buildings create a healthier workplace
- Your role in promoting sustainable building practices
Sustainability

Fulfilling our needs in the present without compromising the potential to meet future needs through:

- Reducing
- Recycling
- Renewable resources
- Redefining creative solutions for common problems
Sustainable Buildings

Balance human needs with environmental considerations including:

- Energy, water, and materials efficiency
- Improved indoor environmental quality and comfort
- Environmentally preferable products and processes
- Improved siting
Why We Need Sustainable Buildings

Buildings and Their Infrastructure:

- Produce over 25% of US greenhouse gases /year
- Consume almost 30% of US energy/year
- Generate 30% of CA solid waste/year
- Cost the state $600M/year for energy, water, waste disposal
- Cost CA $6B/year in sick building syndrome costs
- Affect occupant health, comfort, productivity
Life Cycle Cost

- Sustainable building features may cost more on the front end; however...
- Over the life of a building...
  - initial building cost equals 2% of total costs
  - O&M equals 6% of total costs
  - 92% of the life cycle cost of a building are personnel costs
- Sustainable buildings can increase worker productivity by 20-30%!
Sustainable Buildings are Better ….

- Energy, water, resource efficient
  - 20-40% energy savings over Title 24 standards

- Improved indoor environment
  - Lower VOC exposure
  - Less mold
  - Less airborne particle contamination
  - Less pollutants causing eye, nose, skin irritation, headache, fatigue
Better (continued)

Environmentally preferable products and processes
• Recycled content, low air emissions, and more
• Less waste entering landfills -- up to 90% of construction waste recycled

Superior design and construction methods
• Integrated design
• Optimized life cycle cost
• Post-occupancy evaluation
Improved external environment

- Improved air quality and worker health from reducing commuting
- Recycled products and reduced waste conserves natural resources
- Improved quality of life in surrounding neighborhoods and communities
Potential Impact of Sustainable Buildings

- The State currently spends over $2B/year for design, construction, and renovation:
  - 189 million sq. ft. of state-owned buildings.
  - 21 million sq. ft. of leased space.

- Over $82B will be spent in the next 10 years

- Sustainable design in the Capitol East End Project will save $400K/year in energy
  - 30% better than energy efficiency building standards!
Potential Impact ... (continued)

- A 36% energy savings in State buildings could save 1.4 million megawatt hours annually! *(This equates to enough power for 280,000 California homes!)*

- Demonstrated cost-effectiveness and environmental benefits will result in replication by private and other public building owners and operators
Your Return on Investment

- Lower operating costs
  - More efficient subsystems
- Lower life cycle ownership costs
  - Design integration can lower lighting and HVAC loads
- Higher employee health and well being
  - Reduced absenteeism, illness and fatigue
- Higher worker productivity and morale
  - A friendlier work environment
Your Role

Make Sustainable Buildings Your Issue!

- Incorporate in your building projects
- Incorporate in your commodity purchases
- Insist on an integrated design approach
- Justify your projects on a life-cycle basis
- Support sustainable building efforts by others
Where to Get More Information

- www.ciwmb.ca.gov/greenbuilding
- DGS/RESD Project Management Branch: Lee Willoughby 322-5257
- DGS/Energy Management: John Baca 324-1282
- California Leadership Institute Sustainable Building Group
- Sustainable Building Task Force Report:
  - “Building California’s Sustainable Future,
  - A Blueprint for State Facilities”
Buildings can be designed, constructed, renovated, operated and maintained in a cost-effective and resource efficient manner.

"When we build, let us think that we build for ever."

- John Ruskin-
  (19th Century Artist)