







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"







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: **Keducing Kecycling** Kenewable resources Kedefining creative solutions for common problems







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









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%1







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





Better (continued)

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







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











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







- www.ciwmb.ca.gov/greenbuilding
- DGS/RESD Project Management Branch: Lee Willoughby 322-5257
- Sector 224-1282 DGS/Energy Management: John Baca 324-1282
- Section 2017 Secti
- 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 forever (19th Century Artist)