University of California
Sustainable Practices Policy

Clean Energy Standard

• Reduce energy use, growth adjusted, by 10% or more by 2014 from the 2000 base consumption level
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System

Statistics
• UC System consumes ~ 1.9 Billion kWh/Year
• Lighting represents ~ 400 Million kWhs/Year
• 30 M square feet of office & classroom space
• 6 M square feet of library space
• These spaces are lit with ~ 360,000 ceiling fixtures
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Lighting Conversion Program 2009-2011

Authorized by The Regents in March
• Lighting program portfolio cost - $31.7 Million
• Committed utility incentives - $8.4 Million
• Cost to UC - $23.3 Million
• Number of projects – 220
• Average Project Cost - $144,000
• Reduced UC energy usage - 35 million kWhs
• Annual cost avoidance - $3.5 Million
• Annual debt service - $2.4 Million (for 15 yrs)
• Close to Policy target of 40 million kWhs
Before we delve into it – consider:

- Potential to miss opportunity for new technology applications
- Current technology conversions are good for 15 years
- Should redirect efforts to embrace new technologies
- Opportunity for market transformation
- Adopt advanced task/ambient & bi-level lighting systems
- Take advantage of scotopically enhanced lighting technology
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Lighting Conversion Program 2009-2011

What will it take?

We have funding in current program
- $31.7 million authorized
- $8.4 million from utilities
- $23.3 million cost to UC

New technologies double the energy savings
- ~ $17 million from the utilities
- ~ $14.7 million left from UC sources

New technologies must meet UC financial parameters
- Higher incentives, including cap removal
- Manufacturer cost – economies of scale
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Lighting Conversion Program 2009-2011 & Beyond

Advantages to new technologies
• Lower energy cost (at least 50%)
• Longer life
• Lower maintenance cost
• Better balance with daylight
• Reduced glare
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Lighting Conversion Program 2009-2011 & Beyond

Possible obstacles to new technologies
• Current incentive structure not adequate
• Conversion cost too high due to small market
• Asbestos abatement (ceiling tiles)
• Radical change in appearance
• Initial faculty, student and employee perception
Summary

• UC has an opportunity to demonstrate to the market-at-large that new technologies are viable
• UC can play a role in commercializing new technologies
• Large demonstration sites will assist with new technology acceptance
• Regulatory agencies (CPUC and CEC) are interested in facilitating customized incentive structures
• Manufacturers will introduce products once the market becomes attractive
Summary

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