

SCE Title 20 AB 1109-Related Efforts

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CEC Title 20 Workshop



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Outline

- Past, current, and future projects will be discussed relating to:
 - AB 1109 (Huffman Bill)
- * = Projects will be IOU collaborative efforts

AB 1109-Related Completed Projects



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Neon Scoping Study*

- Coordination with sign industry
- Survey completed in all IOU service territories
 - Indoor vs outdoor
 - Plug-in versus hard-wired
 - Electric load for neon fixtures
 - Neon transformer power factor
- Key Findings
 - Over 70% of indoor neon is plug-in and operates during day
 - Indoor neon represents 28% of total linear feet, 20% of installed wattage, and 29% of annual kWh



Low Ambient with Task Lighting, including occupant control of ambient lights

- Study looked at preferred cubicle lighting levels using a dimmable overhead lighting, under cabinet lighting and portable LED task lighting
- Hypothesis is that when occupants have control of the overhead lighting levels and have access to efficient task lighting, overall lighting levels will be reduced
- Key findings
 - Overall lighting levels reduced by 5 to 19%
 - Distribution of light is critical to satisfaction levels
- Further work required to focus on task lighting criteria that will allow for lower ambient lighting levels and increased satisfaction levels



Fluorescent Sign Lamp Efficacy/Lamp Spacing/Optical Efficiency Improvements

- Study objective was to look at potential lamp improvements in internally illuminated signs
- Study limited to HO (High Output) T12 lamps with improved phosphors
- Hypothesis was that higher efficacy lamps using rare-earth phosphors will allow for fewer lamps for same performance
- Preliminary results indicated that efficacy was not improved but new data was gathered regarding the spacing of lamps



AB 1109 Related Current Projects



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Dimming Ballasts/Controllable Lighting--Market potential study*

- Survey in progress to determine the current practice of specifying and installing dimmable ballasts
- Purpose of study is to support determination of energy savings, demand reduction and DR potential
- Focus on specifiers and their use of dimming ballasts:
 - Applications
 - Drivers for dimming ballast
 - Percentage of dimming ballasts specified
 - Reasons for not specifying dimming ballasts
 - Operation of specified ballasts



Super CFL (Statewide)

- Develop high performance CFL:
 - Dimmable
 - High CRI
 - Appropriate color temperature
- Preliminary specs have been developed
- In process, but will need further work with manufacturers and appropriate codes to get into the market



AB 1109 Related Future Projects



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Portable Lighting for Office Applications, including task lighting*

- Eliminate poor performing fluorescent and halogen lights
- Examine lights in work areas, specifically:
 - Under cabinet lights
 - Partition-mounted lights
 - Desktop portable task lights
 - Office torchieres



Neon Lighting Systems*

- SCE has surveyed neon lighting
 - Study found that they perform poorly
- Improve power factor/ballast factor for new and retrofit applications
- SCE working with sign industry



Ceiling Fan Lighting Kits

- New homes are covered by Title 24
- Targeting retrofit applications
 - People purchase kit and install, no regulation of these purchases
- Currently not energy efficient
- PIER- partnership with CLTC and fan manufacturer to develop all-LED system



Landscape Lighting Kits

- Plug-in landscape lighting is not covered by Title 24
- Targeting:
 - Malibu-type lights
 - Pathway lighting (residential and commercial)
 - Flood lights



Lighting for Vending Machine and Beverage Coolers

- Investigate use of high efficiency lighting systems/controls
- Complementary work to the refrigeration aspects of vending machines and beverage coolers
- Aware of advertising function of machines and lighting level criteria



Directional Lighting

- Scoping study to determine what areas can be improved
- Lamps to be considered:
 - MR 16
 - PAR
 - BR
- Consider certain wattage ranges
- Commercial and Residential



Lighting Controls

- Scoping study to determine what lights can and need to have controls
- Identify all opportunities for switching/DR
- On/Off Chip for plug load DR
- Possible areas:
 - Vending machines
 - Track lighting
 - Task lighting
 - Fan Lights
 - Neon
 - Etc.



LED Open Signs

- Technology currently available which allows replacement
 - Any color sign can be replaced
 - Approximately 1/10th of energy and demand usage



Track Lighting Kits

- Study the potential regulation of power/controls/DR capability by setting maximum power limits
- Targeting retrofit applications
 - People purchase kit and install, no regulation of these purchases
- Look at both line voltage as well as low-voltage applications



Communicating/Addressable Ballasts/Luminaires*

- Continuation of the survey work with architects and engineers
- Recommendations for regulations pending outcome of survey



Luminaire Efficacy

- Scoping study to determine which luminaires may be applicable for regulation
- Low priority



Explore Regulation of Incandescent Lights (non- “A” Lamps)

- Explore substitutes for specialty lamps in various categories that may have potential for higher efficacies



QUESTIONS ?



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