



# NEMA Position on CEC April 2008 Proposed Changes to Title 20

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# NEMA Lighting Systems Division Positions

“Systems solutions” through Title 24 and other means represent a more effective solution for the citizens of California to realize energy savings than currently proposed Title 20 rulemaking

CEC-400-2008-014-SD proposals will result in a negative net present value for California citizens and eliminate more cost effective proven energy savings means based on electromagnetic ballast technology

CEC-400-2008-014-SD proposals risk

- lower reliability of lighting systems
- major disruption to the supply chain in California

## Current proposals

- 💡 Current proposals increase ballast efficiency from current 88% levels
  - 90% for wattages from 150W to 275W
  - 92% for wattages from >275W to 500W
- 💡 Proposed levels have the potential to effectively eliminate many of the most popular electromagnetic ballast solutions available in California, requiring costly electronic ballast alternatives
- 💡 Many current dimming alternatives utilizing electromagnetic ballasts would be eliminated by the current proposals



## Energy savings from current proposal

- 💡 2.3% to 4.5% depending on wattage level
- 💡 NEMA's position is that there is no industry accepted direct correlation between ballast efficiency and any other energy saving factor
- 💡 For a 350W metal halide ballast system this results in 78.8 kWh per year energy savings
- 💡 This can be projected to result in a present value of lifetime energy savings of \$75.33



## Cost adder per luminaire for present CEC proposal

- 💡 Ballast cost adder estimates run between \$50 to \$200 depending on the source
- 💡 Luminaire cost adder will be even higher due to commercialization costs associated with typically larger housings needed for electronic ballasts
- 💡 Even assuming a “lower end” adder estimate of \$75 for a 350W luminaire, net present value is \$0.33 for a energy savings present value of \$75.33 - and NEMA expects that the actual luminaire cost to consumers will be significantly higher



## Bottom Line

- 💡 Current proposal
  - 💡 Delivers minimal energy savings
  - 💡 Will result in unjustified cost increases to end users
  - 💡 Looks backwards rather than forwards...
  - 💡 *A new approach* is needed to meet California's energy challenges for lighting



## Systems alternative

- 💡 Adding dimming and controls to metal halide systems can result in over 25% energy savings in many applications
  - Occupancy sensors in warehouses
  - Occupancy sensors in parking lots\*
  - Daylight sensors

\*also decreases “light trespass” and unwanted sky illumination
  
- 💡 Adding dimming and controls to electromagnetic metal halide ballasts typically costs less than changing to fixed output electronic ballasts



## Systems alternative

- 💡 For the same \$75 additional cost estimate, applications that can utilize dimming electromagnetic ballasts can save over 435 kWhr annually and realize a present value of energy of over \$415 per luminaire (over \$340 net present value per luminaire)
- 💡 Existing electromagnetic metal halide dimming systems represent a proven technology for meeting California's energy reduction needs



## Moving forward

NEMA wishes to continue working with the California Energy Commission and Utilities in defining system approaches that will allow California to meet it's energy reduction goals through multiple cost effective means