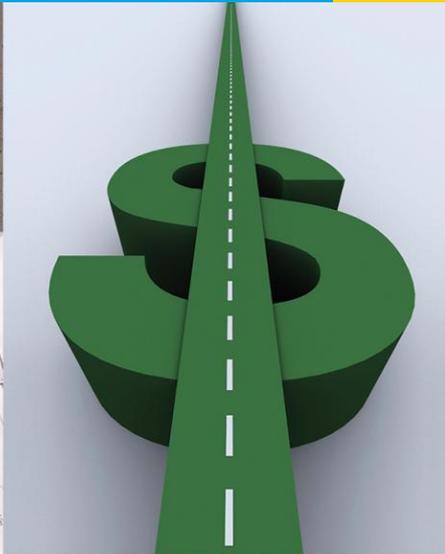


Commercial Building Energy Alliances

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



CBEA Efficiency Forum

Lighting Project Team Breakout Sessions – Day 2

May 24, 2012

National Renewable Energy
Laboratory (NREL)
Golden, Colorado

- Capture actionable input on barriers and solutions to deploying CBEA projects, which will be vetted with stakeholders on Day 2
- Compile barriers, solutions, and new projects for plenary report back
 - 7 min. maximum

- Introductions and agenda overview (15 min)
- Overview of current projects (15 min):
 - CBEA Lighting Resources available now (High Efficiency Specs for parking lot, parking structure, and troffers (1'x4', 2'x4', 2'x2')), Jeff McCullough, PNNL
 - High Efficiency Exterior Lighting Campaign Overview, Paul Wessel, Green Parking Council
- Top implementation barriers identified by CBEA members from Day 1 (30 min)
 - Lack of AE firm knowledge/experience with advanced technologies
 - High first cost of new technologies (8-10 yr. vs. 1-2 yr. SPB)
 - “I don’t want to be the first person on my block...” How do we know the new technologies will deliver as promised?

- Questions asked by members on Day 1 (30 min)
 - Where to you see the market going w.r.t. SSL?
 - Any plans for open source controls or standards?
 - Concerns (potential UL issues) for LED retrofits of troffers
 - How are you working with your distribution networks to inform them about advanced technologies?
 - What are the issues surrounding rare earth phosphors and what impact will it have on existing fluorescent and SSL technologies
 - Any other questions members would like to ask of stakeholders?
- Compile Solutions for report-out at closing plenary (15 min)

- Discuss CBEA member proposed 2013 projects (35 min)
 - MR-16s
 - PAR-38s
 - More cost effective control systems
 - Bi-level street/area lighting
 - Stairwell lighting
 - Wall packs and other exterior lighting applications as part of a more comprehensive exterior lighting solution. How can suppliers support the High Efficiency Exterior Lighting Campaign?
 - Others?
- Open floor for Stakeholders to propose new ideas to CBEA (5 min, each stakeholder (55 min))
- Compile top 2013 projects and stakeholder ideas for closing plenary (15 min)

Taking our Lighting Specs Downstream:

**High Efficiency Lighting Specifications
meet the Parking &
Building Management Industries**

The Opportunity:

- Energy savings of over 30% compared to ASHRAE 90.1-2010, and 50% or more compared to earlier codes. Add controls and daylighting to save even more.
- Reduced maintenance, user satisfaction
- Accelerated uptake of new technologies
- Taking our specs on the road:
 - Smaller organizations
 - Complicated management structures



High Efficiency Exterior Lighting Campaign

Goals:

- Increase the number of parking lots and parking structures that deliver attractive lighting while saving energy and money
- Document best practices and resulting energy savings
- Recognize successes
- Help companies make business case
- Usability testing
- Inspire evangelists



Questions looking to answer

- What are the obstacles to adoption and how do we overcome them?
- How do the specifications work in the marketplace?
- What inhibits the market?
 - Lack of knowledge?
 - Long term ROI?
 - Disconnects between building owner, building manager and parking operator?
- How do we create evangelists?
- What's the role of lighting vendors and installers?
- How do we best build this collaboration?



High Efficiency Exterior Lighting Campaign

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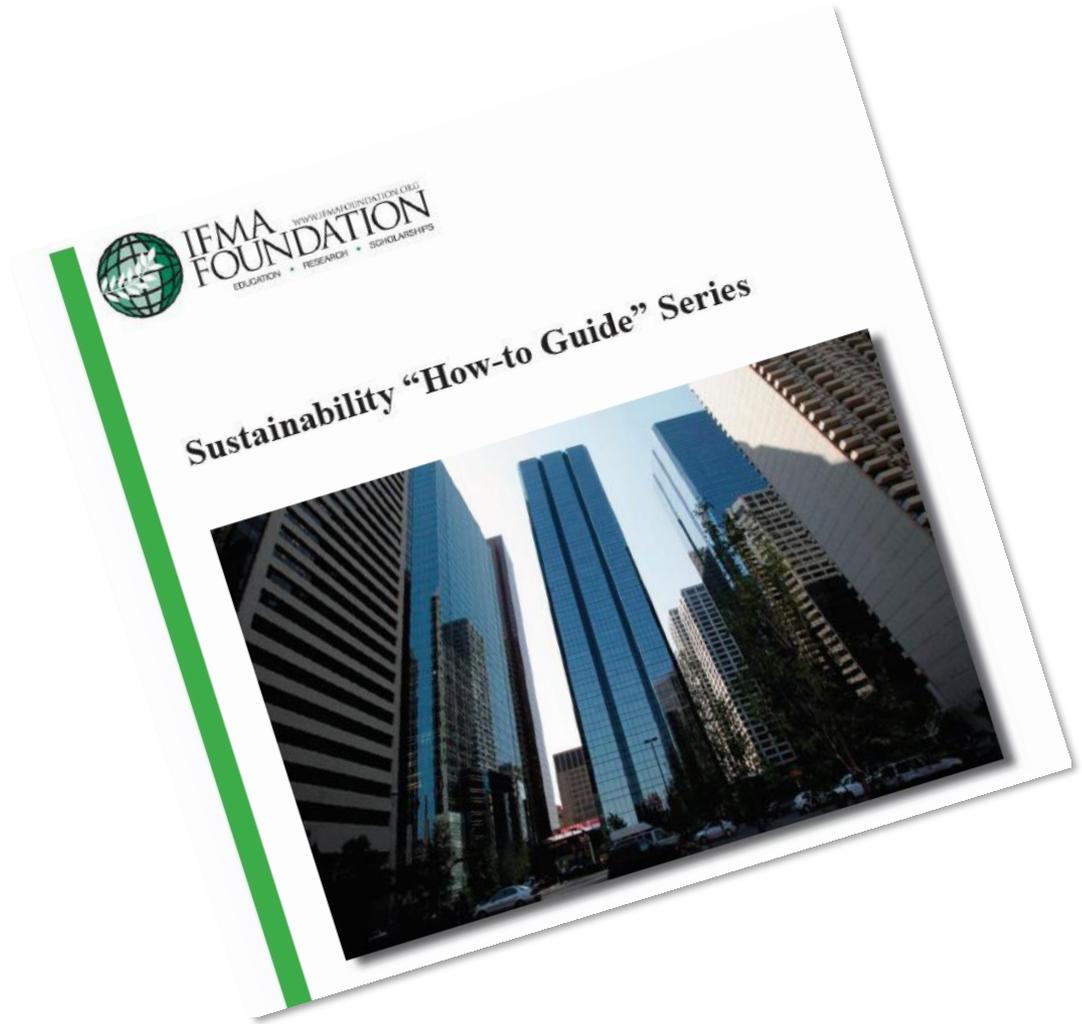
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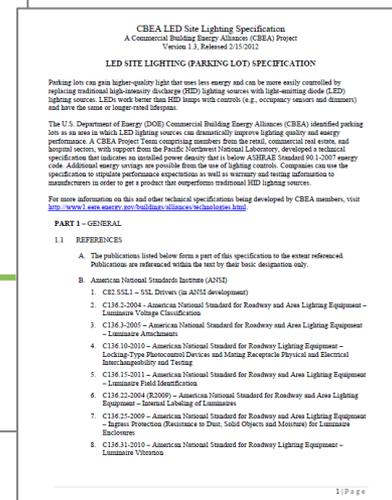
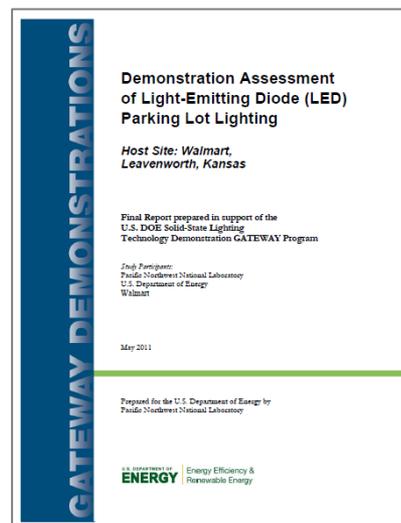


High Efficiency Exterior Lighting Campaign



Building owner/manager/parking operator role:

- **Evaluate** the business case with the help of Lighting Campaign resources
- **Build or retrofit** at least one parking lot or parking structure to meet the spec
- **Report** expected and actual energy savings (kWh/ft²)
- **Share** feedback to improve these resources and enable replication by others



High Efficiency Exterior Lighting Campaign

Available Resources:

- CBEA lighting specifications
- M&V guidance
- Gateway demonstrations
- Financial tools (coming soon)

Recognition for:

- Best implementation model across a portfolio
- Best application of controls
- Greatest energy savings: single site, and portfolio-wide

Official Launch Fall 2012



Naming the Campaign:

lu·mi·nary  *noun* \ˈlū-mə-ner-ē\
plural **lu·mi·nar·ies**

Definition of LUMINARY 

1 : a person of prominence or brilliant achievement

2 : a body that gives light; *especially* : one of the celestial bodies

— **luminary** *adjective*

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