

2014 DOE SOLID-STATE LIGHTING MARKET DEVELOPMENT WORKSHOP

November 12–13, 2014 • Detroit Marriott at the Renaissance Center • Detroit, MI

Workshop Agenda

WEDNESDAY, NOVEMBER 12

7:00 a.m. *Registration Opens and Continental Breakfast*

OPENING SESSION

8:00 a.m. **WELCOME**
MAYOR MIKE DUGGAN, CITY OF DETROIT

KEYNOTE ADDRESS
BYRON AUGUSTE, DEPUTY ASSISTANT TO THE PRESIDENT
DEPUTY DIRECTOR, WHITE HOUSE NATIONAL ECONOMIC COUNCIL

OPENING REMARKS
KERRY C. DUGGAN, LIAISON TO THE CITY OF DETROIT
OFFICE OF THE SECRETARY, U.S. DEPARTMENT OF ENERGY

8:30 a.m. *Break*

WHERE ARE WE NOW?

TODAY'S LIGHTING PRODUCTS—TRENDS AND CHALLENGES

8:45 a.m. **Workshop Introduction**
Solid-state lighting is revolutionizing lighting products, systems, and practices in ways we've never seen before. But the same unique properties that enable this transformation also present a host of new challenges. Learn the latest on today's toughest lighting issues, and find out what's next on the horizon.
JAMES BRODRICK, U.S. DEPARTMENT OF ENERGY

9:00 a.m. **Tuning the Spectrum: Light, Health, and the Pursuit of Happiness**
LED light sources have reinvented lighting as we know it, enabling manufacturers to customize their products and tune their color recipes to achieve benefits beyond simply lighting a space. An increasing number of manufacturers are offering color changing LED products, with the promise of health and behavioral benefits. But how much do we know about these products and the validity of these claims? A manufacturer, researcher, and specifier offer insights on value-added product benefits, what research is still needed, and the process and challenges for specifying health-focused lighting systems.
MODERATOR: MICHAEL ROYER, PACIFIC NORTHWEST NATIONAL LABORATORY
STEVEN LOCKLEY, HARVARD UNIVERSITY
LESLIE NORTH, AURORA LIGHTING DESIGN
JOHN HWANG, PLANLED

10:30 a.m. *Refreshment Break*

11:00 a.m. Systems Thinking: Combining Hardware and Design Strategies

While the industry has made rapid progress with various components of SSL systems, addressing the overall lighting system rather than individual components may produce more substantial benefits. But what do we mean by the phrase, “lighting as a system”? At the hardware level, lighting as a system means closely integrating the luminaires, controls, and user interface to optimize the overall system performance and operation. But at the design level, lighting as a system refers to creating a visual environment that fully supports the user experience, in terms of the desired activities, behaviors, and impressions. How does SSL technology enable or possibly inhibit these system-based approaches? Can further integration of hardware enable deeper energy savings while improving the user experience? Our panel of designers and researchers will discuss these issues, with examples from their own projects.

MODERATOR/SPEAKER: BOB DAVIS, PACIFIC NORTHWEST NATIONAL LABORATORY
LORI BROCK, OSRAM SYLVANIA
RODRIGO MANRIQUEZ, SMITHGROUPJJR

12:30 p.m. Lunch**1:30 p.m. Specifying LED in a World of Continuous Change**

LED technology is ever-changing, dynamic, and improving at a pace never seen before in the lighting world. For specifiers, it can be like jumping into a fast-moving river. The rapid pace of LED change, combined with long lead times for new construction and major renovation, can cause significant challenges for all parties. Between product specification and actual procurement, a year or two or more may have elapsed and the specified LED products almost certainly will have changed. This puts the designer in a tough position: they have to re-check and revise the design, or risk problems due to incompatibility of the new products with the controls system and other components. What can be done to improve this situation? No one wants to slow the pace of technology and product improvement, but how can manufacturers ensure upgraded products will still work as planned?

MODERATOR/SPEAKER: NAOMI MILLER, PACIFIC NORTHWEST NATIONAL LABORATORY
SCOTT HERSHMAN, LF ILLUMINATION
JIM YORGEY, LUTRON
BRIENNE WILLCOCK, ILLUMINART

3:00 p.m. Refreshment Break**TODAY’S UTILITY LIGHTING PROGRAMS—TRENDS AND CHALLENGES****3:30 p.m. Managing Today’s Utility Programs: Keeping Up with Product Changes**

LED technology is still relatively young, and constantly evolving. What are the challenges utilities face in staying abreast of rapid product changes, what costs are incurred, and what energy saving opportunities are lost without frequent changes to program rules? Find out how utility program implementers are keeping pace, and learn the latest strategies for looking ahead.

MODERATOR: LIESEL WHITNEY-SCHULTE, FRANKLIN ENERGY SERVICES
VICKI CAMPBELL, DTE ENERGY
JACKIE DUCHARME, XCEL ENERGY
CORY GORDON, DUKE ENERGY

- 4:30 p.m. **Participating in Today's Utility Programs: Keeping Up with Requirements**
Utility programs and qualified product lists can have a huge impact on product sales, but they are also costly and complicated to participate in. What changes would make these programs less expensive, more effective, and easier to work with? Hear varied perspectives from leading manufacturers.
- MODERATOR: MARCI SANDERS, D&R INTERNATIONAL
DON BARUS, HUBBELL LIGHTING & CONTROLS
KANDICE COHEN, EATON COOPER LIGHTING
KRIS EVANS, CREE

5:30 p.m. *Networking Reception*

THURSDAY, NOVEMBER 13

7:00 a.m. *Continental Breakfast*

WHAT'S NEXT FOR SSL?

- 8:00 a.m. **Solid-State Lighting: Early Lessons Learned on the Way to Market**
Ten months ago, DOE published a report that analyzed early lessons learned from SSL market entry, with an eye toward identifying key challenges and their implications for the future. The report offers analysis and recommendations for consideration by manufacturers, standards organizations, energy efficiency programs, retailers, specifiers, and other stakeholders, to aid in the continuous course corrections needed to achieve the full potential of SSL technology. This talk will provide an update on various efforts to address the early lessons, and encourage further discussion and action.
- KELLY GORDON, PACIFIC NORTHWEST NATIONAL LABORATORY
- 8:30 a.m. **Market Trends**
The SSL market continues to evolve rapidly. Form factors are changing, market penetration is rising, performance is increasing, and new features are being added. What are some of the major trends and changes we are seeing with SSL technology, and what's on the horizon? Industry experts offer varied perspectives on what's next for SSL.
- MODERATOR/SPEAKER: MARY YAMADA, NAVIGANT
DAN MELLINGER, EFFICIENCY VERMONT
MAURY WRIGHT, LEDs MAGAZINE

10:00 a.m. *Refreshment Break*

TOMORROW'S LIGHTING SYSTEMS

10:30 a.m. **Control System Interoperability: Can We Talk?**

LED products with integrated controls are quickly becoming mainstream, but improved interoperability among control system components is essential for the market to thrive and realize its full potential. What are the issues hampering interoperability, who is working on them, and what do buyers and specifiers need to know?

MODERATOR/SPEAKER: MICHAEL POPLAWSKI, PACIFIC NORTHWEST NATIONAL LABORATORY
PAUL DUNN, TELENESA/TALQ CONSORTIUM
PEKKA HAKKARAINEN, LUTRON/THE CONNECTED LIGHTING ALLIANCE

Noon

Lunch

1:00 p.m. **Oh, the Places You'll Go, If You Have Smart Lighting**

Smartphones are actually small computers that happen to be used as phones. Smart cars no longer require you to drive. The web is buzzing with ideas about smart televisions, smart traffic signals, and smart wearables, but what about smart lighting? What is smart lighting? Will it help us save energy in lighting our buildings and cities, or will it use MORE energy? Can it help us improve lighting quality? How will it go beyond illumination to benefit society? What concerns are raised by lighting systems that provide more than light? Join our panel of thought leaders for a fascinating glimpse into the future of smart lighting.

MODERATOR/SPEAKER: ANDREA WILKERSON, PACIFIC NORTHWEST NATIONAL LABORATORY
PARTHA DUTTA, RENSSELAER POLYTECHNIC INSTITUTE
SUSANNE SEITINGER, PHILIPS COLOR KINETICS

2:30 p.m.

Refreshment Break

TOMORROW'S UTILITY LIGHTING PROGRAMS

3:00 p.m. **Utility Lighting Programs of the Future**

As LED lighting migrates from lamps and luminaires to lighting systems, what will the utility lighting program of the future look like? Will it abandon the one-for-one replacement emphasis of most programs in favor of custom incentives? Will it use qualified product lists? Will it require the extent of testing currently required? What new features will be needed?

MODERATOR/SPEAKER: MARC LEDBETTER, PACIFIC NORTHWEST NATIONAL LABORATORY
CHRIS CORCORAN, NYSERDA
KENN LATAL, ICF INTERNATIONAL
KELLY SANDERS, NORTHWEST ENERGY EFFICIENCY ALLIANCE

4:30 p.m.

Adjourn