

2017 SOLID-STATE LIGHTING TECHNOLOGY TRENDS WORKSHOP AGENDA

November 9, 2017 • Portland, OR

The SSL Technology Trends Workshop, hosted by the Next Generation Lighting Industry Alliance, will share lessons learned from indoor and outdoor connected lighting installations, results from DOE connected lighting test bed studies, and perspectives on lighting trends that may influence future SSL technology advances.

7:00 a.m. *Continental Breakfast*

MORNING SESSIONS

8:00 a.m. **Welcome and Introduction**

JEFF QUINLAN, NEXT GENERATION LIGHTING INDUSTRY ALLIANCE

8:15 a.m. **Smart Street Lighting Solutions for the Windy City**

Chicago's smart street lighting project is poised to become one of the largest municipal lighting modernization programs in the country, featuring conversion of the city's current HPS streetlights to a fully connected LED streetlight system. Learn the latest on the project, and lessons learned along the way.

DANIELLE DuMERER, CITY OF CHICAGO

9:00 a.m. **Lessons Learned in a Living Lab**

The Next Generation Lighting Systems Competition is under way, and seven different connected lighting systems have been installed in classrooms at Parsons School of Design, The New School, in New York City. What have we learned so far, during installation and configuration? What are lighting experts and users saying, in their performance evaluations? This session will highlight key findings and lessons learned to date, as the ongoing evaluations continue.

RUTH TAYLOR, PACIFIC NORTHWEST NATIONAL LABORATORY
CRAIG BERNECKER, PARSONS THE NEW SCHOOL FOR DESIGN

9:45 a.m. **What Can We Learn in a Connected Lighting Test Bed?**

This talk will provide a snapshot of various studies under way in the DOE test bed, highlighting current energy reporting capabilities of Power over Ethernet and other connected lighting systems, how APIs (application programming interface) are currently facilitating interoperability (or not), the development of test methods for cybersecurity vulnerabilities, and more.

MICHAEL POPLAWSKI, PACIFIC NORTHWEST NATIONAL LABORATORY

10:30 a.m. *Refreshment Break*

11:00 a.m. **Lighting Market Trends**

DOE studies reveal a wealth of insights into LED adoption trends and the rapidly changing lighting market. Which applications are taking off, and what technology limitations might be holding others back? This talk will provide an overview of major trends and changes, and examine what it will take to realize the full energy-saving potential of LED technology.

MARY YAMADA, NAVIGANT

11:30 a.m.

Lighting as a Service: An Important New Opportunity?

Some voices in the lighting industry are advocating for a new business model known as “Lighting as a Service” or LaaS, arguing it is needed to help the lighting industry exploit new technological capability, to overcome various business challenges, and to create new technology and business opportunities. Is this really something new, or is it a re-packaging of something that has been tried before? Hear a leading advocate for Lighting as a Service explain the concept, and make the case for why LaaS is so compelling for solid-state lighting.

VIRGINIA HEWITT, SPARKFUND

12:00 p.m.

Lunch

AFTERNOON SESSIONS

1:00 p.m.

Panel | Will LED Lighting Systems Change Daylighting Design for Energy Efficient Buildings?

LED lighting systems continue to increase in efficiency and may be, or may soon be, more energy efficient than daylight for some buildings. The mean luminous efficacy for the over 7,000 linear luminaires listed by LED Lighting Facts is 110 lm/W, up from 91 lm/W in 2014. While LED lighting system efficiency continues to rise, the price continues to drop. The efficiency of daylight penetration in a building is more difficult to characterize, and depends on daylight simulations that take into account many factors including the type and size of window, the design and orientation of the building, and regional climate. Daylight is free light, but may increase HVAC energy usage, as well as controls, windows and shading costs. This panel will consider these factors as well as windows for view, health, and aesthetics when discussing how the efficiency of LED lighting systems may affect the incorporation of daylight into energy efficient buildings.

MODERATOR: ANDREA WILKERSON, PACIFIC NORTHWEST NATIONAL LABORATORY

GALEN BURRELL, ARUP

CRAIG CASEY, LUTRON

JENNIFER SCHEIB, UNIVERSITY OF COLORADO AT BOULDER

KEVIN G. VAN DEN WYMELENBERG, UNIVERSITY OF OREGON

3:00 p.m.

Adjourn