

Partnerships Are Integral to Driving SSL Innovation

The U.S. Department of Energy SSL program has forged strategic partnerships with key industry stakeholders to advance the technology

Partners are integral to shaping and implementing DOE's ever-evolving R&D strategies for solid-state lighting (SSL). DOE acts as a catalyst, pulling together industry, academia, standards organizations, utilities, energy efficiency organizations, lighting designers and specifiers, and building owners to determine the pathway for meeting ambitious performance goals.

Three influential industry associations support DOE in building partnerships: the Next Generation Lighting Industry Alliance (NGLIA), the Illuminating Engineering Society of North America (IES), and the International Association of Lighting Designers (IALD). These associations engage leading experts and institutions in identifying and toppling technology challenges, in order to accelerate SSL's development and market introduction.

Next Generation Lighting Industry Alliance

The Next Generation Lighting Industry Alliance is an alliance of lighting manufacturers formed to accelerate



DOE's strategic partnerships with industry, academia, utilities, specifiers, and others help shape DOE's strategies for solid-state lighting and determine the pathway for meeting ambitious SSL performance goals.

SSL development and commercialization through government-industry partnership. DOE's Memorandum of Understanding (MOU) with NGLIA is designed to enhance the manufacturing and commercialization focus of the DOE SSL program, and gives DOE access to the manufacturing expertise of NGLIA's members: Acuity Brands, CAO Group, Corning, Cree, EYE Lighting International, GE Lighting, Lumileds, OSRAM Sylvania, Philips, and Universal Display Corporation.

The DOE-NGLIA MOU is the result of a directive in the Energy Policy Act of 2005, prompting DOE to competitively select and partner with an industry alliance that represents U.S. SSL research, development, infrastructure, and manufacturing expertise. NGLIA members

bring valuable industry perspective to a wide range of DOE SSL program activities, participating in DOE SSL roundtable discussions, serving as expert speakers at DOE SSL workshops, and providing support and input for annual updates to the DOE Solid-State Lighting R&D Plan. Members also participate in GATEWAY demonstrations, product quality initiatives such as LED Lighting Facts®, and working groups such as the NGLIA-sponsored LED Systems Reliability Consortium.

Illuminating Engineering Society of North America

The Illuminating Engineering Society of North America is the recognized technical authority on illumination and communicates information on all aspects

of good lighting practice to its members, the lighting community, and consumers. DOE's MOU with IES underscores the Department's commitment to support the development of needed metrics and test methods for SSL technology. DOE participates in IES committee activities, providing technical support and analysis for the development of many standards that have set the foundation for SSL product development and adoption, including:

- IES LM-79-2008, *Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products*
- IES LM-80-2015, *Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules*
- IES TM-21-2011, *Projecting Long Term Lumen Maintenance of LED Light Sources*
- IES TM-30-2015, *Method for Evaluating Light Source Color Rendition*



Industry partners bring valuable perspective serving as expert speakers at DOE SSL workshops. Conversely, attendees offer critical input and feedback that can have significant influence on technology development.

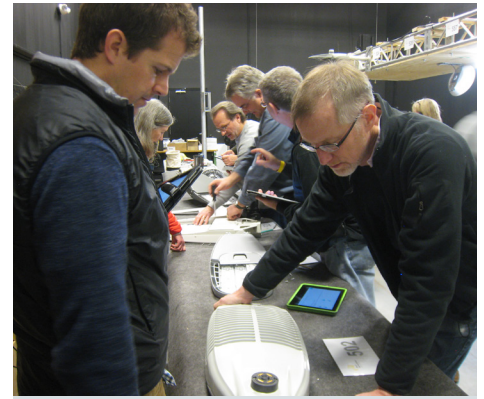


Each published standard reflects years of technical support and committee meetings to forge industry consensus. However, publishing a standard is just the beginning of its journey to widespread acceptance as a best practice. Standards acquire credibility over time through testing, measurements, and use in real-world specifications. Once technical guidance has been articulated in a published standard, IES and DOE continue to educate audiences on how to use a new standard, to help build the experience base that establishes validity and earns preference among professional practitioners.

International Association of Lighting Designers

The International Association of Lighting Designers is an internationally recognized organization of professionals dedicated to the highest standards in lighting design. DOE's MOU with IALD calls for working cooperatively toward improving the efficient use of energy by lighting equipment and systems and by improving lighting quality in the built environment.

IALD works closely with DOE on a number of fronts. The two organizations co-host periodic roundtables with IALD members to solicit the lighting designer perspective on SSL market and technology issues, and to provide input to guide DOE SSL program planning. The partnership provides IALD members with specific, actionable technical information they can use to ask tough questions of their vendors and thereby exert significant influence on technology development. IALD members also participate in various DOE projects, such as GATEWAY demonstrations, with particular attention to helping DOE assess lighting quality.



Next Generation Luminaires competition inspires product innovation

IES, IALD, and DOE are co-sponsors of the Next Generation Luminaires™ design competition, which recognizes excellence in the design of energy-efficient LED commercial lighting luminaires. IES and IALD members serve on NGL judging panels, offering expert insight and rigorous evaluation, as well as the NGL steering committee, where they hone the competition's requirements and categories each year to ensure that it continues to drive innovation and showcase the top specifiable products.

