Office of Energy Efficiency & Renewable Energy

U.S. Department of Energy Announces Winners of L-Prize Prototype Phase

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Today, the U.S. Department of Energy (DOE) announced six winners in Phase Two of the **DOE Lighting Prize (L-Prize®) competition**. The L-Prize is a $12 million lighting competition designed to spur ground-breaking innovation for next-generation lighting in commercial buildings. Winning products will redefine the future of illumination in commercial buildings, demonstrating exceptional energy efficiency, connectivity and control, visual quality, environmental sustainability, and attention to diversity, equity, and inclusion (DEI) in lighting design, manufacturing, and application.

Today's announcement recognizes the winners of Phase Two, the Prototype Phase. Competitors were invited to submit working prototypes that meet the rigorous L-Prize requirements and exceed the capabilities of currently available products in two categories: Luminaires and Connected Systems.

"Investing in next-generation lighting solutions helps tackle the climate crisis, boosting American supply chains and manufacturing of these technologies, and creating good-paying jobs," said Mandy Mahoney, Director of the Building Technologies Office at DOE. "The winning prototypes represent ground-breaking innovation, not only in energy efficiency, data-driven connectivity, and environmental sustainability, but also prioritizing communities that get overlooked when we roll out new prototypes. These innovators are leading the way."

The winners of Phase Two share a prize pool of $2 million and are encouraged to move on to the third and final phase of the L-Prize, the Manufacturing and Installation Phase. Participation in the prior Concept or Prototype Phases is not required to enter the final

phase of the L-Prize.

Luminaire Track Winners:

- **Generation Flex: Light Without Compromise, submitted by Signify Innovation, Bridgewater, NJ ($375,000)**. Signify developed a modular luminaire with groundbreaking efficacy balanced with excellent color quality and novel optics that offer good light distribution with reduced high angle glare. The highly modular design and lightweight form factor provide flexibility and potential sustainability benefits. The team proposed a DEI pilot supply chain program that favors suppliers with DEI programs.
- **Low-Carbon Biodegradable Luminaire, submitted by Lightly, Boothwyn, PA ($375,000)**. Lightly developed a low-carbon, architectural-grade linear luminaire, utilizing locally sourced materials grown in the United States. The high-efficacy luminaire is made of novel, biodegradable materials, using wood, hemp, and wool as alternatives to plastic and metal. The localized production/supply chain uses poplar harvested in the area, and a declare label provides material transparency.
- **Helios HPR-LP160, submitted by Grid Interactive Efficient Building Alliance (GiEBA), San Diego, CA ($250,000)**. GiEBA developed a high-efficacy architectural-grade 2'x4' troffer with integral networked communications based on the open-source Google Thread wireless protocol. The troffer collects and stores luminaire data beyond the L-Prize requirements, and the built-in wireless capability allows for a basic sensor to be installed without wireless capabilities. The luminaire is designed for disassembly with modular components and easy-to-follow end-of-life diagrams for disassembly and recycling.

Connected Systems Track Winners:

- **Interact Next-Gen: Light the Way to Building Goals, submitted by Signify Innovation, Bridgewater, NJ ($375,000)**. Signify developed a simple, scalable wireless solution that interfaces with other building systems. A map-based user interface provides intuitive configuration and control, and role-based apps right-size the capabilities and data to user needs. An all-in-one sensor offers capabilities beyond lighting (e.g., temperature and humidity control, beacon for positioning) and energy harvesting switches provide installation and sustainability benefits with no battery or wiring.
- **Autani Insights 4REAL, with Sensing by Leviton, submitted by Autani and Leviton, Columbia, MD ($375,000)**. Autani developed a highly interoperable system offering a rich feature set of options and capabilities and using open standard protocols. Tiered offerings allow the system to be packaged and right-sized for customer needs and level of sophistication. The comprehensive, well-documented OpenAPI-compliant interface offers access to all available datapoints, enhancing value and energy-savings opportunities through integration with other systems.

- **Bluetooth® Mesh Wireless Lighting Control System, submitted by McWong International, Sacramento, CA ($250,000)**. McWong developed a wireless lighting control system with an easy-to-use, intuitive interface. Non-proprietary Bluetooth Mesh communication protocols enable off-the-shelf components to be used and allow more user choice, futureproofing, and cost reduction benefits. The ability to produce a configuration commissioning report offers a quick, unique, and useful feature for determining compliance with control narratives or developing designer punch lists.

The third and final phase of the L-Prize — Manufacturing and Installation — will present fresh opportunities for awards and recognition. Participation in prior phases is not required; all eligible entrants are welcome to participate. The final phase will reward U.S. manufacturing and installation of lighting systems that meet rigorous L-Prize technical requirements, build in life cycle sustainability, and increase diversity, equity, and inclusion in the lighting workforce and efficient lighting user communities. Participants are encouraged to form teams as necessary to turn great ideas into real products and installations.

The first L-Prize was awarded by DOE in 2011 to recognize a high-efficiency LED replacement for the traditional 60-watt A19 incandescent bulb. The winning A-lamp was a breakthrough that signaled a turning point in commercially available LED lighting, and the current L-Prize seeks comparable impact from the next generation of lighting on the way to decarbonizing the built environment.

The L-Prize is led by DOE's **Building Technologies Office** within the **Office of Energy Efficiency and Renewable Energy** and is administered by the National Renewable Energy Laboratory, with lead technical support from the Pacific Northwest National Laboratory.

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