

U.S. Department of Energy

Manufacturing & Installation Phase

Informational Webinar

May 8, 2 P.M. ET



Housekeeping

- This webinar is being recorded and will be posted on the HeroX website
- Attendees will be on mute throughout the presentation
- If you have any questions, please type them into the Q&A panel and we will do our best to address each question
- We may be unable to answer some technical or teaming questions.
 Answers to all questions received will be posted in the HeroX Forum following the webinar: www.herox.com/LPrize/forum

Speakers



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



Rebecca Bennett

National Renewable

Energy Laboratory



Wyatt Merrill
U.S. Department
of Energy



Gabe ArnoldPacific Northwest
National Laboratory

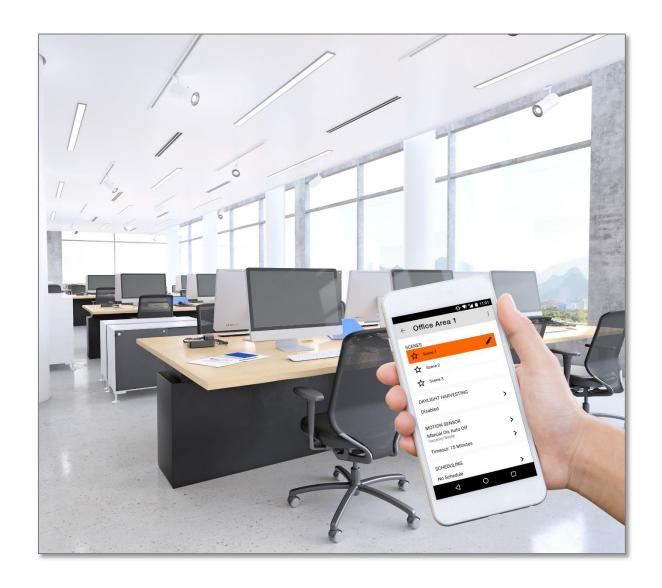


Kate Hickcox
Pacific Northwest
National Laboratory

L-Prize

Introduction and Overview

L-Prize Opportunity



The L-Prize targets linear lighting in commercial buildings where large energy savings potential remains and where lighting system connectivity and data can drive new value and **building systems** optimization.

PHASE 1: CONCEPT

UP TO 10 WINNERS (**\$20,000** EACH)

PHASE 2: PROTOTYPE

UP TO 6 WINNERS (\$2,000,000 PRIZE POOL)

PHASE 3: MANUFACTURING & INSTALLATION

UP TO 4 WINNERS (\$10,000,000 PRIZE POOL)

9 MONTHS

COMPLETE 4 Winners

16 MONTHS

COMPLETE 6 Winners

— 22 MONTHS

NOW OPEN

Informational Webinar May 8, 2:00 p.m. Eastern



U.S. Department of Energy

LPrize@nrel.gov

american made challenges.org/challenges/lprize

Congratulations to the Prototype Phase Winners

Luminaire Track

Generation Flex: Light Without Compromise Signify by Signify Innovation



Low-Carbon **Biodegradable Luminaire** by Lightly



Helios HPR-LP160 by Grid Interactive Efficient **Building Alliance (GiEBA)**



Connected Systems Track

Interact Next Gen: **Light the Way to Building Goals** by Signify Innovation



Autani Insights 4REAL, with sensing by Leviton by Autani and Leviton



Bluetooth Mesh Wireless **Lighting Control System** by MW Connect (formerly **McWong International**)



L-Prize Innovation and Focus Areas

ENERGY EQUITY, ACCESSIBILITY, AND RESILIENCE EFFICACY CONNECTIVITY **TECHNICAL** QUALITY **PRODUCT U.S. CONTENT, OF LIGHT** LIFE CYCLE INNOVATION PRODUCTION, AND INSTALLATION

Resource List

- DOE is opening a voluntary Resource List to facilitate connections between potential entrants and supporting entities for M&I Phase
- Entities with potential installation host sites or support services are invited to express interest to support an L-Prize entrant
- Use of the list is optional by L-Prize competitors
- DOE does not endorse or qualify entities on the list, and makes no guarantee of the availability of supporting entities for competitors on the list



Manufacturing & Installation Phase Resource List Response Form

U.S. Department of Energy

The L-Prize® is compiling a resource list to facilitate connections between potential entrants and supporting entities for the Manufacturing & Installation (M&I) Phase of the competition, which is currently open and will remain open until the anticipated submission deadline in August 2025. For the M&I Phase, entrants must document the installation of their lighting solution in a real commercial building. While some entrants may prefer to identify their own installation sites, others may find it helpful to use the resource list to identify potential installation partners or host-sites. The resource list will be posted publicly at https://www.herox.com/LPrize/resources and updated as needed.

Note: By enabling and publishing the resource list, DOE is not endorsing, sponsoring, or otherwise evaluating the qualifications of the individuals and organizations that are self-identifying themselves for placement on this list.

Potential installation partners or host-sites interested in supporting an entrant should complete the form below and submit via email to LPrize@nrel.gov. The email subject line must be "L-Prize M&I Resource List." Forms may be submitted throughout the duration of the L-Prize competition. Submitting your information identifies your organization as an interested party only.

- 1. Organization:
- 2. Point of contact (POC) name:
- POC Title:
- 4. POC Email:
- 5. POC Phone:
- 6. Installation Partner Interest
 - ☐ Provide, or assist with finding, an installation host site for an L-Prize entry
 - Provide incentives/rebates for an L-Prize entry installation
 - Provide electrical contracting installation services for an L-Prize entry
 - Provide design/specification services for an L-Prize entry installation
- 7. Abstract (five keywords, and an additional paragraph of up to 300 characters, to describe the role your organization is interested in playing to partner with an L-Prize entry or team)
- If applicable, any concerns or potential barriers to your participation:

To view the full competition details, visit the L-Prize website.

L-Prize

Manufacturing and Installation (M&I) Phase Overview

M&I Phase Structure - How do you win?

- Separate tracks for luminaires and connected systems; competitors may submit entries to one or both tracks
- Submissions will be reviewed by Expert Reviewer Panel (ERP)
 - ERP = Independent experts with expertise in lighting science, LEDs, engineering, energy efficiency, connected lighting, sustainability, DEI considerations, and lighting manufacturing
- ERP will recommend submissions that meet minimum requirements and earn most points to DOE as winners
 - Some available points are prescriptive (i.e., meet a specific threshold of performance and earn a predefined number of points)
 - Some available points are subjective (e.g., ERP will assign points on a scale of 0 to 10 or 0 to 15 for a particular area of innovation)

Types of Points – Luminaire Track

Prescriptive Points

Topic	Maximum Points
Luminaire Efficacy	10
Color Rendition	5
Visual Comfort	10
Circular Design	10
Total	35

- Prescriptive points are awarded for meeting specified levels of performance based on actual test results.
- Subjective points are scored directly by the ERP based on their subjective assessments of the listed innovation categories, U.S. content, and production and deployment plan.

Subjective Points

Topic/Criterion	Maximum Points
Materials and Sustainability Innovation	10
Application Efficiency	10
Form Factor and Aesthetics	10
Ease of Installation	10
Affordability and Value Proposition	10
Health and Wellbeing	10
U.S. Content	15
Production and Deployment Plan	15
Total	90

Types of Points – Connected Systems Track

Prescriptive Points

Topic	Maximum Points
Application Interoperability	15
System Resilience	15
Fault Detection and Diagnostics (FDD)	15
Grid Services Capable	15
Total	60

- Prescriptive points are awarded for meeting specified levels of performance based on actual test results.
- Subjective points are scored directly by the ERP based on their subjective assessments of the listed innovation categories, U.S. content, production and deployment plan, and U.S. installation.

Subjective Points

Topic/Criterion	Maximum Points
Life Cycle and Sustainability Innovation	10
Ease of Installation and Use	10
Compatibility and Interoperability	10
Scalability	10
Affordability and Value Proposition	10
Health and Wellbeing	10
U.S. Content	15
Production and Deployment Plan	15
U.S. Installation	15
Total	105

Luminaire Track - Minimum Requirements and Possible Points Summary

Category	Topic	Tonic Minimum Poquiroment(c)		Max pts
Category	·	Minimum Requirement(s)	Possible Points per Topic	_
Efficacy	Luminaire Efficacy	≥150 lm/W	Up to 10 pts. for performance above 150 lm/W	10 pts.
	Light Output	> 2,000 lm	n/a	4
	Color Rendition	Preference rating of P2, fidelity rating of F3	5 pts. for improved preference rating of P1	4
	Chromaticity	4000 K, Duv between -0.006 and 0.002	n/a	
	Glare Control	UGR ≤ 22 or technical justification	n/a	
Quality of Light	Temporal Light Modulation (TLM, Flicker)	Fundamental frequency > 90 Hz, SVM ≤ 0.4	n/a	15 pts.
	Dimming Range	Dims to 5% or lower	n/a	
	Spectral Power Data (SPD)	SPD in ≤ 5-nm increments	n/a	
	White-Tunable	If product is white-tunable, must be tested at 4000 K	n/a	
	Visual Comfort	n/a	Up to 10 pts. scored by ERP	
	Standards-Based Digital Driver	Uses D4i™-compliant smart driver	n/a	
Connectivity	Standards-Based Sensor Port and Connector	Contains Zhaga Book 20-compliant sensor port and connector	n/a	n/a
	Circular Design	TM66 CEAM-Make ≥ 2	5 pts. for TM66 CEAM-Make ≥ 2.5; additional 5 pts. for TM66 CEAM-Make ≥ 3 (10 pts. total)	
	Life Cycle Assessment (LCA)	LCA and EPD required	n/a	
	Replaceable Components	Light sources and drivers must be replaceable	n/a	
Product Life Cycle	Labeling and Markings	Labeling or markings with service, disassembly, and end-of-life info required	n/a	20 pts.
	Materials and Sustainability Innovation	n/a	Up to 10 pts. scored by the ERP	
	Lumen Maintenance	$L_{90} \ge 36,000 \text{ hrs and } L_{70} \ge 50,000 \text{ hrs}$	n/a	
	Chromaticity Maintenance	≤ 0.002 at 6,000 hrs	n/a	
	Driver Lifetime	≥ 50,000 hrs	n/a	
	Application Efficiency	n/a	Up to 10 pts. scored by the ERP	
	Form Factor and Aesthetics	n/a	Up to 10 pts. scored by the ERP	
Technical Innovation	Ease of Installation	n/a	Up to 10 pts. scored by the ERP	50 pts.
	Affordability and Value Proposition	n/a	Up to 10 pts. scored by the ERP	
	Health and Wellbeing	n/a	Up to 10 pts. scored by the ERP	
U.S. Content, Production, and	U.S. Content	U.S. assembly required	Up to 15 pts. for additional U.S. content scored by ERP	
	Production and Deployment Plan	Documentation production and deployment plan must be provided	Up to 15 pts. based on quality of plan scored by ERP	30 pts.
Installation	U.S. Installation	At least 1 U.Sbased project installation	n/a	
	Commercial Availability	Luminaire must be fully certified for safety and commercially available	n/a	

Luminaire Track – Efficacy



Topic	✓ Minimum Requirements	☐ Possible Points
Luminaire Efficacy	Luminous efficacy must be ≥ 150 lm/W	Up to 10 possible points: • ≥ 160 lumens per watt = 2 additional points • ≥ 170 lumens per watt = 4 additional points • ≥ 180 lumens per watt = 6 additional points • ≥ 190 lumens per watt = 8 additional points • ≥ 200 lumens per watt = 10 additional points

Luminaire Track – Quality of Light

Quality of Light

- ✓ Light Output
- √+□ Color Rendition
- ✓ Chromaticity
- ✓ Glare Control
- ✓ Temporal Light Modulation (TLM, Flicker)
- ✓ Dimming Range
- ✓ Spectral Power Data (SPD)
- √ White-Tunable
- ☐ Visual Comfort

Topic	✓ Minimum Requirements	☐ Possible Points
Light Output	Initial luminous flux > 2,000 lm	
Color Rendition	TM-30 Annex E preference rating of P2 and fidelity rating of F3	(+5) for TM-30 preference rating of P1 and fidelity rating of F3
Chromaticity	CCT must be 4,000 K D _{uv} must be between -0.006 and +0.002	
Glare Control	UGR must be \leq 22 or technical justification reviewed by ERP is determined to be acceptable	
Temporal Light Modulation (TLM, Flicker)	SVM must be ≤ 0.4 at dimming levels of 100%, 50%, and the minimum dimmed light output; PWM is not permitted below 20 kHz; Fundamental frequency must be > 90 Hz	
Dimming Range	Dimming range from max (100%) to min (≤5%)	
Spectral Power Data (SPD)	SPD in ANSI/IES TM-27-20 format; 380-780 nm in \leq 5 nm increments	
White-Tunable	White-tunable luminaires must be evaluated at CCT = 4,000 K	
Visual Comfort		(+10) for visual comfort as scored by the ERP

Luminaire Track – Connectivity

Connectivity

✓ Standards-Based Digital Driver √ Standards-Based Sensor Port and Connector

Topic	✓ Minimum Requirements	☐ Possible Points
Standards-Based Digital Driver	Luminaires must utilize an LED driver with standardized power, data, and sensor capabilities in compliance with D4i, as established by the DALI Alliance	Zhaga Book 20 or other standardized Daille Continue
Standards-Based Sensor Port and Connector	Luminaires must incorporate a standardized sensor receptacle aperture in compliance with Zhaga Book 20 or NEMA LS 20000-2021 shapes RR1, RR2, CC1, CC3, ORC5, or EM1 The sensor receptacle must be prewired with a Zhaga Book 20 compliant 2-wire connection to the DALI-bus terminals of the D4i driver	other standardized Shape/Size Receptacle Zhaga Book 20 Connector

Luminaire Track - Product Life Cycle

Product Life Cycle

- √+□ Circular Design
- ✓ Life Cycle Assessment (LCA)
- ✓ Replaceable Components
- ✓ Labeling and Markings
- Materials and
- Sustainability Innovation
- ✓ Lumen Maintenance
- ✓ Chromaticity

Maintenance

✓ Driver Lifetime

Topic	✓ Minimum Requirements	☐ Possible Points
Circular Design	TM66 Circular Economy Assured quality mark of 2 or higher	 Up to 10 possible points: TM66 score ≥ 2.5 = 5 additional points TM66 score ≥ 3 = 10 additional points
Life Cycle Assessment (LCA)	A verified LCA and environmental product declaration (EPD); life cycle stages A1-A5 (production and construction), B1-B7 (use), and C1-C4 (end-of-life)	
Replaceable Components	Replaceable LED driver and LED array/module or LED light engine	
Labeling and Markings	Label or markings directed to manufacturer's website for servicing, disassembly, and end-of-life information	
Materials and Sustainability Innovation		Up to 10 points for material transparency or material health innovations
Lumen Maintenance	$L_{90} \ge 36{,}000 \text{ hrs and } L70 \ge 50{,}000 \text{ hrs}$	
Chromaticity Maintenance	Chromaticity maintenance ≤ 0.002 over the initial 6,000 hours of operation	
Driver Lifetime	Driver lifetime ≥ 50,000hrs	

Luminaire Track - Technical Innovation

Technical
Innovation

- Application Efficiency
- ☐ Form Factor and **Aesthetics**
- Ease of Installation
- ☐ Affordability and Value Proposition
- ☐ Health and Wellbeing

Topic	✓ Minimum Requirements	☐ Possible Points
Application Efficiency		Up to 10 points for improved in-application efficiency beyond luminaire efficacy (e.g., improved optics/distribution/ increased comfort, reduced glare)
Form Factor and Aesthetics		Up to 10 points for improved acceptability and adoptability (e.g., design orientated, broad adoption)
Ease of Installation		Up to 10 possible points for ease/standardization of installation
Affordability and Value Proposition		Up to 10 points for reduction of up-front cost, improved user affordability, improved value proposition
Health and Wellbeing		Up to 10 points for science-backed innovations to improve health and wellbeing of building occupants

Luminaire Track - U.S. Content, Production, and Installation

U.S. Content, Production, and Installation

- √+□ U.S. Content
- √+□ Production and Deployment Plan
- ✓ U.S. Installation
- ✓ Commercial Availability

Topic	✓ Minimum Requirements	☐ Possible Points	
U.S. Content	Final assembly of finished luminaire in the U.S.	Up to 15 possible points for additional U.S. content beyond U.S. assembly	
Production and Deployment Plan	Documented plan that describes competitor's capabilities, strategy to manufacture luminaires, and goto-market strategy for large-scale deployment	Up to 15 possible points for the quality, credibility, and responsiveness of the plan	
U.S. Installation	1-3 U.S. installation(s) of at least 20 luminaires total that can be physically visited by the DOE		
Commercial Availability	Luminaires must be fully commercially available for purchase, with complete, final documentation and literature readily available on the manufacturer's website Luminaires must be certified with all appropriate electrical and safety certifications		

Connected Systems Track - Minimum Requirements and Possible Points Summary

Category	Topic	Minimum Requirement(s)	Possible Points per Topic	Max Pts
	Standards-Based Luminaire or System Controller	Interoperable with D4i™ drivers and/or sensor	n/a	
	Technical Interoperability	Complies with industry standard specification for basic network connectivity	n/a	
	Application Interoperability	Access to zone, occupancy, faults, energy data	Up to 15 pts. if BACnet certified to support HVAC integration	
	Addressability	All luminaires and devices are addressable	n/a	
	Cybersecurity	Third-party certification	n/a	
Connectivity	Energy Reporting	Energy reporting capability required	n/a	
	Lighting Control Strategies	Task, schedule, occupancy, daylight control required	n/a	
	System Resilience	Maintains control after temporary loss of connection to network or power	15 pts. for maintaining control after loss of connection to gateway	
	Fault Detection and Diagnostics (FDD)	Reports basic system faults	Up to 15 pts. for advanced, predictive FDD capabilities	
	Standards-Based Luminaire Level Lighting Control (LLLC)	D4i sensing/communication module per luminaire	n/a	
	Grid Services Capable	OpenADR 3.0 demand response required	Up to 15 pts. for advanced grid services capabilities using OpenADR 3.0	
Product Life Cycle	Life Cycle and Sustainability Innovation	n/a	Up to 10 pts. scored by the ERP	10 pts.
	Labeling and Markings	Labeling or markings with service, disassembly, end-of-life info required	n/a	
	Ease of Installation and Use	n/a	Up to 10 pts. scored by the ERP	
	Compatibility and Interoperability	n/a	Up to 10 pts. scored by the ERP	50 pts.
Technical Innovation	Scalability	n/a	Up to 10 pts. scored by the ERP	
	Affordability and Value Proposition	n/a	Up to 10 pts. scored by the ERP	
	Health and Wellbeing	n/a	Up to 10 pts. scored by the ERP	
U.S. Content, Production, and Installation	U.S. Content	n/a	Up to 15 pts. for documented U.S. content scored by ERP	45 pts.
	Production and Deployment Plan	Documented production and deployment plan must be provided	Up to 15 pts. based on quality of plan scored by ERP	
	U.S. Installation	At least 1 U.Sbased project installation	15 pts. for lighting + HVAC integration at installation site	
	Commercial Availability	Connected system must be fully certified and commercially available	n/a	

Connected Systems Track - Connectivity

Connectivity

Standards-Based Luminaire or System

Controller

✓ Technical

Interoperability

√+□ Application

Interoperability

Addressability

✓ Cybersecurity

✓ Energy Reporting

✓ Lighting Control

Strategies

√+□ System Resilience

√+□ Fault Detection and

Diagnostics (FDD)

√ Standards-Based Luminaire-Level Lighting Control (LLLC)

√+□ Grid Services Capable

Topic	✓ Minimum Requirements	☐ Possible Points
Standards-Based Luminaire or System Controller	Ability to communicate with and control luminaires with D4i-certified drivers and/or sensors	
Technical Interoperability	Network interfaces incorporated into system devices to enable exchange of data with other system devices	
Application Interoperability	Application programming interface (API) that provides access to occupancy, energy, zone, maintenance data use data API developer documentation and OpenAPI specifications (OAS) encoded in JSON	 Up to 15 possible points for HVAC integration capabilities: BACnet interface that shares lighting cumulative energy use and zone occupancy = 10 points BACnet interface that also calculates and shares customized HVAC zone occupancy = 5 additional points
Addressability	All system components must be digitally addressable	
Cybersecurity	Third-party certification for cybersecurity performance	
Energy Reporting	Reporting of cumulative energy use using D4i driver data	
Lighting Control Strategies	Task tuning, scheduling, occupancy sensing, daylight harvesting, and manual control by a building occupant	

Connected Systems Track – Connectivity

Connectivity

√ Standards-Based Luminaire or System Controller

✓ Technical Interoperability

√+□ Application Interoperability

- ✓ Addressability
- ✓ Cybersecurity
- ✓ Energy Reporting
- ✓ Lighting Control

Strategies

√+□ System Resilience

√+□ Fault Detection and

Diagnostics (FDD)

✓ Standards-Based

Luminaire-Level Lighting

Control (LLLC)

√ +□ Grid Services

Capable

Topic	✓ Minimum Requirements	☐ Possible Points
System Resilience	Resilience to loss of connection to internet, or electrical power up to 48 hours	15 possible points for maintained control strategy implementation with loss of connection to next higher networked element (e.g., gateway)
Fault Detection and Diagnostics (FDD)	Fault identification and reporting (e.g., device/equipment errors, loss of network communication)	 Up to 15 possible points: 8 points for leveraging D4i driver data to diagnose faults 7 additional points for predicting faults and/or remaining life of LED components
Luminaire-Level Lighting Control (LLLC)	Luminaire-mounted D4i-certified sensing/communication module	
Grid Services Capable	Demand response capability and OpenADR 3.0 compliance	 Up to 15 possible points: OpenADR 3.0 price signals with varying responses = 8 points Configurable ramp rates for different spaces (i.e., always respond, conditionally respond, never respond) = 7 additional points

Connected Systems Track - Product Life Cycle

Product Life Cycle

☐ Life Cycle and Sustainability Innovation ✓ Labeling and Markings

Topic	✓ Minimum Requirements	☐ Possible Points
Life Cycle and Sustainability Innovation		Up to 10 possible points for innovations that support positive environmental impacts such as improve circularity, end-of-life outcomes, reduction in harmful materials, or improved material transparency
Labeling and Markings	Labeling or markings on major connected system components that lead to the manufacturer's website for detailed instructions and guides to support servicing, disassembly, and end-of-life	

Material transparency:

- the disclosure of the ingredients and processes used to create materials or products
- their potential human health effects, environmental impacts, or social equity

Connected Systems Track – Technical Innovation

Technical Innovation

- ☐ Ease of Installation and Use
- □ Compatibility and Interoperability
- Scalability
- ☐ Affordability and Value Proposition
- ☐ Health and Wellbeing

Topic	✓ Minimum Requirements	☐ Possible Points
Ease of Installation and Use		Up to 10 points for innovations simplifying and/or improving the ease of installing, configuring, operating, and/or maintaining system
Compatibility and Interoperability		Up to 10 points for innovations improving compatibility and/or interoperability with other lighting and/or nonlighting devices and systems
Scalability		Up to 10 points for innovations that allow for deployment in a wide range of building sizes and types, with varying levels of customer sophistication and budgets, and with the ability to scale-up over time
Affordability and Value Proposition		Up to 10 points for reduction of up-front cost, improved user affordability, improved value proposition
Health and Wellbeing		Up to 10 points for science-backed innovations to improve health and wellbeing of building occupants

Connected Systems Track – U.S. Content, Production, and Installation

U.S. Content, Production, and Installation

☐ U.S. Content √+□ Production and Deployment Plan ✓+□ U.S. Installation ✓ Commercial Availability

Topic	✓ Minimum Requirements	☐ Possible Points
U.S. Content		Up to 15 points for systems that demonstrate significant U.S. content by manufacturing and/or assembling components or subsystem components in the U.S.
Production and Deployment Plan	Documented plan that describes competitor's capabilities, strategy to manufacture luminaires, and goto-market strategy for large-scale deployment	Up to 15 points for the quality, credibility, and responsiveness of the plan
U.S. Installation	At least 1 U.S. installation of the connected system that can be physically visited by the DOE in one of the targeted applications of the L-Prize	15 points if the installation demonstrates lighting and HVAC integration
Commercial Availability	Fully commercially available for purchase with complete, final documentation and literature readily available on the manufacturer's website	
	Certified with all appropriate electrical and safety certifications	

M&I Phase Timeline and Submission Package

Competitors submit working physical luminaires or connected systems

April 3, 2024

M&I Phase opens for submissions

October 1, 2024
Expression of Interest forms due

April 1, 2025
Intent to Submit forms due

June – July 2025 Connected Systems pre-testing August 5, 2025

M&I Phase
submissions due (all tracks)

February 2026
(anticipated)

M&I Phase winners
announced

A complete submission package will include:

- Cover page, which may be released to the public by DOE
- PowerPoint summary slide, which may be released to the public by DOE
- Images of luminaire/connected system components, manufacturing, team, and installation, which may be released to the public by DOE
- Technical Documentation listed under "Materials to Submit" in Appendices A & B for each category topic
- Completed M&I Phase Technical Performance and Scoring Form
- Description of key innovations and features
- Three complete working physical luminaires or connected systems
- Systems one-line diagram and instructions for ERP (Connected Systems Track only)

See Appendix D of the Official Rules for a checklist of all submission materials

L-Prize

HeroX Overview



U.S. Department of Energy

Official rules available online

https://americanmadechallenges .org/challenges/lprize/docs/L-Prize_Official_Rules.pdf





Lighting Prize (L-Prize) MANUFACTURING AND INSTALLATION (M&I) PHASE RULES

Issued April 3, 2024

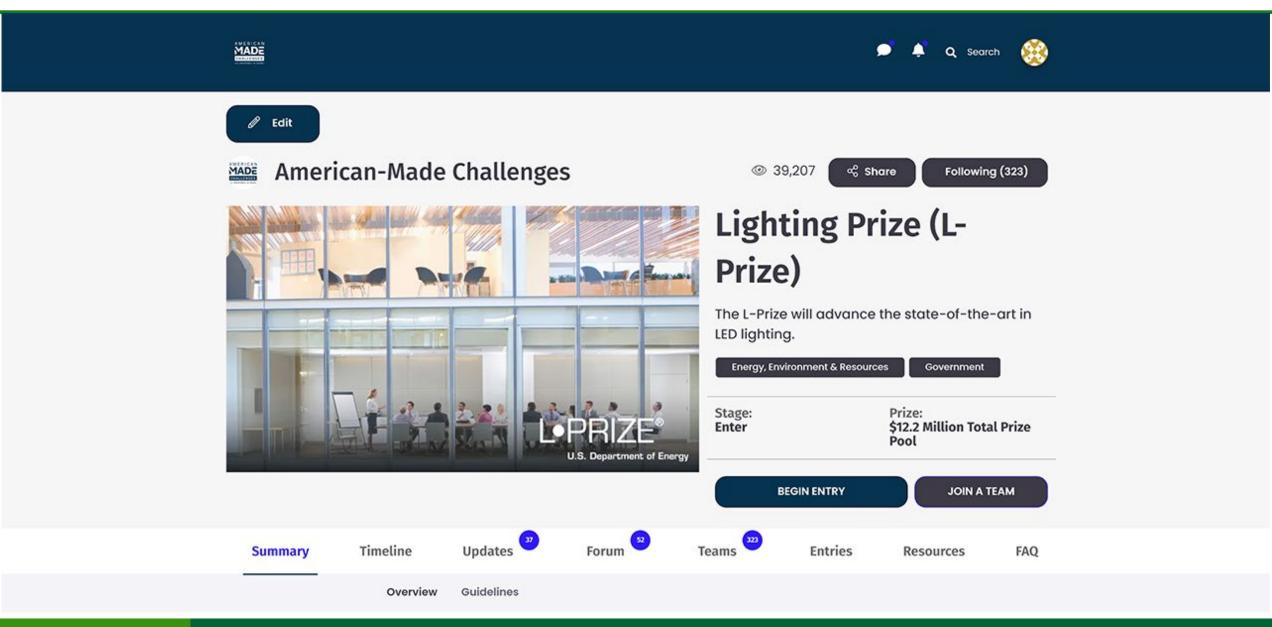
The L-Prize® will advance the state of the art in light-emitting diode (LED) lighting, encouraging technology developers and researchers to engage in advanced lighting system development, leading to groundbreaking designs, products, and impact for all Americans.







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Questions?

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