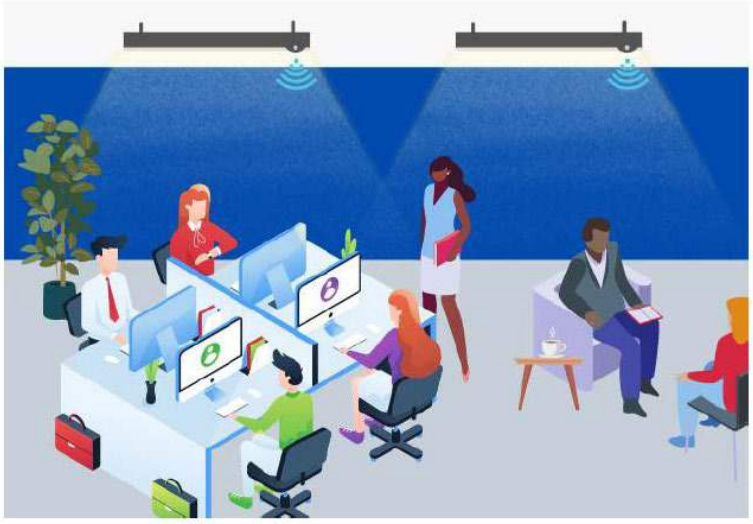
MEMBER GUIDANCE

SSL V6.0 & LUNA V.2

TRANSITIONING TO THE NEW TECHNICAL REQUIREMENTS

Commercial Lighting Programs Transitioning to SSL V6.0 and LUNA V2.0

The DesignLights Consortium's Technical Requirements for LED Lighting: SSL V6.0 and LUNA V2.0 mark the most significant advancement in commercial and outdoor lighting qualification criteria since SSL V5.1 was released in 2020. These updates reflect years of stakeholder engagement, extensive technical analysis, and a shared vision for lighting that delivers deeper energy savings, enhanced controllability, improved spectral performance, and responsible environmental outcomes.



More than three-quarters of North American electric energy efficiency programs use DLC's Qualified Products Lists (QPLs) to define rebate eligibility, establish TRM baselines, and guide incentive cost-effectiveness. SSL V6.0 and LUNA V2.0 provide utility members with a clear, credible, future aligned framework to maintain savings goals, adapt to evolving market expectations, and support carbon reduction and grid-interactive buildings.

1. Adopting SSL V6.0 and LUNA V2.0

Transitioning efficiency programs to SSL V6.0 and encouraging adoption of LUNA V2.0 will ensure that incentive offerings continue to drive market transformation, remain aligned with high-performance lighting, and anticipate regulatory trends.

Lighting remains one of the most effective and scalable savings opportunities in commercial programs. However, the market has accelerated rapidly:

- First-generation LEDs are now reaching end of life and are ready for replacement with more efficacious luminaires and controls.
- Advanced networked lighting controls (NLCs) and luminaire level lighting controls (LLLCs) have matured and are increasingly utilized to meet code requirements.

- Municipalities and states are introducing light pollution ordinances, environmental protections, and dark sky regulations.
- Although customer demand for integrated systems remains limited today, enabling lighting to connect with HVAC, sensors, renewable energy, and building automation will be essential for future scalability and value.

SSL V6.0 and LUNA V2.0 respond directly to these industry advancements by:

- Raising minimum efficacy to modern performance levels
- Categorizing luminaires by controllability to support NLC/LLLC integration with other building systems
- Providing new pathways to incentivize environmentally responsible outdoor lighting
- Streamlining SSL and LUNA into a unified, easier-to-use criteria set

This transition is not just a policy update; it is a strategic opportunity for utility programs to capture the next generation of lighting savings and future incentive offerings.

2. Update Internal Program Documentation and Eligibility Specifications

The QPL will have new product types and new fields of information so program manuals, application forms, internal guidance documents, and marketing materials should be revised to specify SSL V6.0 (and LUNA V2.0 where applicable) as the qualifying versions for incentives.

3. Revise Technical Reference Manuals (TRM), and Baseline Assumptions

Energy savings under SSL V6.0 and LUNA V2.0 come from both higher product performance and longer-term persistence. By raising the minimum efficacy thresholds across all product categories, the new requirements lower fixture wattage and drive immediate reductions in energy consumption. Although these higher baselines narrow the wattage delta for some categories, the expansion of controllability requirements, specifically for continuous dimming to ≤ 20 percent for Standard products and ≤ 10 percent for Premium, significantly increases the achievable savings per fixture when paired with sensors or networked controls. In addition, the Premium classification requires a minimum lumen maintenance of L90 at 36,000 hours and driver life of at least 50,000 hours, ensuring that high-performing products deliver sustained energy reductions and extend the useful lifetime of installed measures, improving overall savings persistence and long-term cost-effectiveness.

4. Implement Tiered Incentive Structures for SSL Standard, SSL Premium, and LUNA

To support program cost-effectiveness and market transformation, programs should consider establishing separate incentive tiers corresponding to:

- SSL V6.0 Standard (baseline qualification)
- SSL V6.0 Premium (higher efficacy, dimming, extended lifetime)
- LUNA V2.0 (outdoor environmental performance: CCT, BUG, U-rating, tilt, SPD requirements)

LUNA is not mandatory but provides more choices for communities looking for energy-efficient lighting that can meet dark sky ordinance/bylaw requirements and is eligible for rebates

5. Maximize Savings with Networked Lighting Controls & LLLC Integration.

SSL V6.0 positions controllability as a core expectation, not a premium add-on. Programs should

consider integrating SSL V6.0's mandatory dimming and controls capabilities into cost-effectiveness models, rebate designs, and program messaging.

- Networked lighting controls have demonstrated additional savings of 35–50% beyond LED-only rebates. TRM Research report.
- V6.0 controls fields on the QPL now make it easier to identify eligible products by control capability specific to the model number

6. Understand the New Controls Category Framework

Under SSL V6.0 and LUNA V2.0, controllability is no longer treated as optional reporting, it is a structured performance and classification element directly linked to energy savings claims. Next steps for programs:

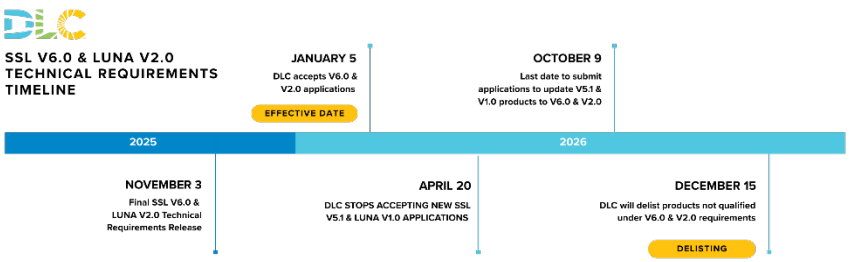
- Incorporate Control Category (0–6) into rebate eligibility criteria, TRM mapping, and savings calculations.
- Require documentation of dimming performance, communication type, and integral controls. To accelerate connected-lighting adoption; prioritize incentives for Categories 5–6 (NLC/LLLC)

7. Incorporate LUNA V2.0 into Outdoor Lighting Program Design:

LUNA V2.0 continues to provide more choices for communities looking for energy efficient outdoor lighting that can meet ordinance/bylaw requirements and is eligible for rebates. Key enhancements include Amber LED options and Screw-base/retrofit options for HID. This provides more choices for communities looking for energy-efficient outdoor lighting that can meet ordinance/bylaw or dark sky requirements and is eligible for rebates.

8. Notify Trade Allies, Distributors, and Customers of Transition Requirements and timeline:

- Programs should provide formal notification outlining key changes, effective dates, and eligibility implications. Communications should emphasize the benefits of SSL V6.0 and LUNA V2.0 products, including higher energy savings, enhanced controllability, improved lighting quality, and environmental benefits of dark-sky compliant luminaires.
- Distributors should verify that their stocked luminaires meet SSL V6.0 and LUNA V2.0: Include stock of LLLC luminaires, Control-ready luminaires and control accessories.
- Take full advantage of the flexibility of field-adjustable color, light output and distribution to reduce the number of SKUs they need to keep on the shelves.
- Key dates and Transition Timeline:



9. Communicate SSL V6.0 Product Benefits with your customers:

Standard Requirements	Policy updates	Benefit
Efficacy	Baseline efficacy levels raised across all categories. On average, the efficacy thresholds in SSL V6.0 are 14% higher than SSL V5.1.	Higher minimum efficacies ensure incented products are top-tier performers, providing a strong basis for savings claims/TRMs. Improves energy savings per fixture and keeps programs aligned with advancing technology.
Dimming Capability	SSL V6.0 (Standard): continuous dimming to ≤20% of max output; Premium: ≤10%. Lamps/luminaires must disclose controls	Enables deeper savings with sensors/controls. Improves comfort via tuning. Supports NLC/LLLC integration
Premium Classification	Premium requires continuous dimming to ≤10%, L90 ≥ 36,000 hours, and driver life ≥ 50,000 hours	Longer product life & reduced maintenance. Supports whole-building energy strategies. Highest performance with lower failure risk
Quality of Light	Indoor CCT eligible range expanded to 1800K–6500K; adopts updated chromaticity standard; maintains CRI/TM-30 reporting.	Adds product reporting for CCT, light output and light distribution, allowing faster and more accurate product verification.
Controls Categories (0–6)	New 7-level framework from “No Controls” (0) to “LLLC” (6). Controls categories are organized by control measure type, allowing programs to more easily connect controls savings factors used in TRMs with controls measures	Allow programs to target deeper savings. Simplifies incentive tiers and aligns with TRM savings.
Networked Lighting Controls Integration	Reporting fields for communication protocol and controls-ready accessories are required.	Simplifies identifying NLC/LLLC-compatible products and enables combined incentives.
Required Non-performance Reporting	Specification sheets are required	Support an enhanced application review speed and QA for utility program
Controls & Communication Reporting	All dimmable products report control communication (wired/wireless protocols) and integral sensor capabilities	Easier to select controls-ready products. Enables future upgrades. Ensures interoperability with smart buildings
LUNA Efficacy Allowances	Recognize lower luminaire efficacy caused by optics/baffles while improving trespass control and neighborhood acceptance	Supports better product adoption Encourages responsible specs without sacrificing savings
LUNA new product eligibility	New product eligibility including medium screw base and mogul screw base replacement lamps and retrofit kits. Low CCT products and amber products	Provides more choices for communities looking for energy-efficient outdoor lighting that can meet ordinance/bylaw requirements and is eligible for rebates.

Need Help Estimating New Savings Assumptions?

- The DLC QPL Analysis Tool will help you quickly evaluate key performance statistics for QPL products to assist with program planning and updating TRM assumptions with SSL V6.0 values. Updated tool will be available by second quarter of 2026.
- The Cost Effectiveness Analysis Tool will allow you to easily evaluate the cost effectiveness of replacing early generation LEDS with new LEDs paired with controls
- The TRM research and workpaper will provide guidance to update new measures

If you have any questions about the SSLV6.0 transition or need additional support, please contact Karla Winter, Member Services Manager at Kwinter@designlights.org