



2016

STAKEHOLDER MEETING

Strategic Direction of DLC Specifications



2016

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Solid-State Lighting Specs

Proposed Spec Changes (TRT 4.1)

- New General Application Category
 - **Very High Output Outdoor Lighting**, $\geq 25,000$ lumens
- New Primary Use Designation
 - **U-Bend Replacement Lamps**
- Definition Change
 - Allow **Refrigerator Case Luminaires** to employ pin-type connectors for the electrical connection only, but not for mechanical support
- Input Requested
 - “Hazardous” definition for future **Hazardous Environment Lighting** Category
- Additional Efforts Under Discussion For Development
 - Definition change to restrict **Linear Replacement Lamps** to G13 base
 - **T5 Linear Replacement Lamps**

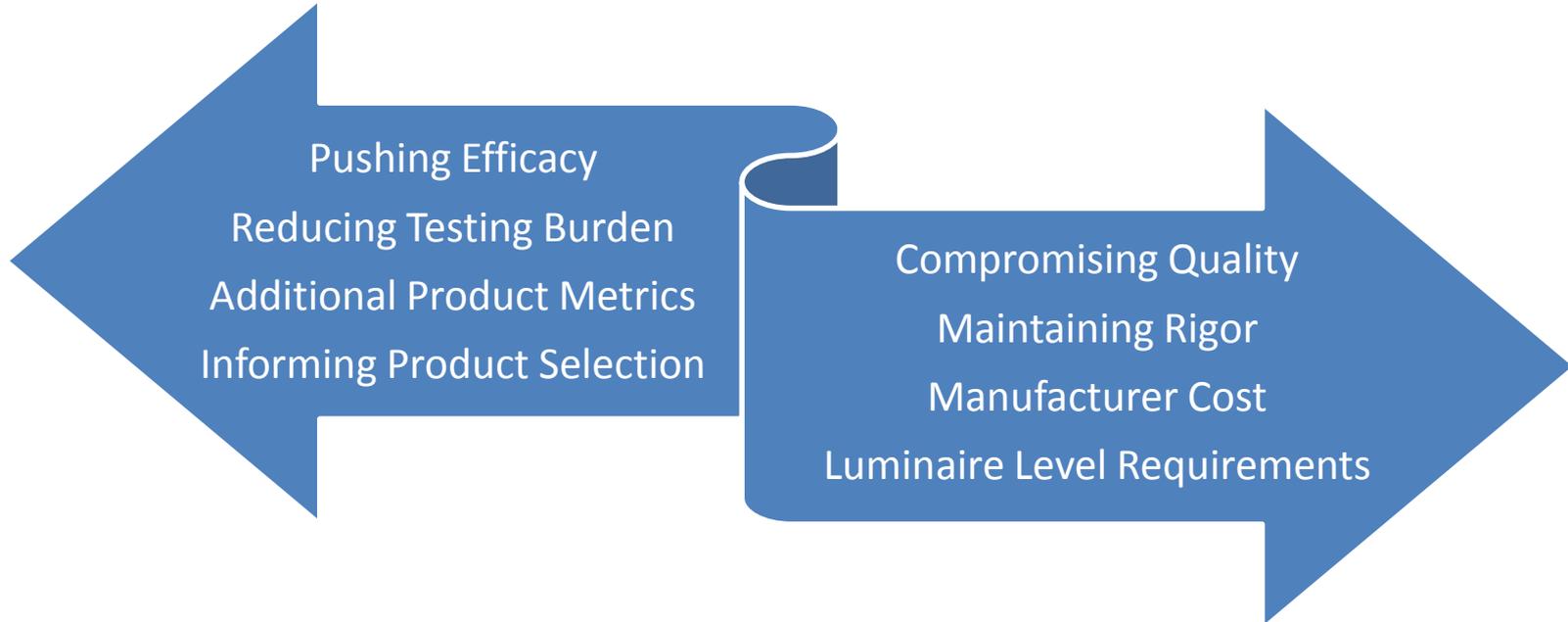
Policy Proposals Overview

- Revision to Private Labeling Policy
 - Require Private Label Applicants to provide proof of safety certification under own organization
- Rated Data for Single and Family Grouping Applications
 - Require rated data to be representative of product's tested configuration
- Adoption of ANSI C78-377-2015
 - Updated color metrics standard
- Additional Proposals Requested Addressing:
 - DC/PoE Systems
 - White Color Tuning

Summarized Wish List

- Ambient Lighting
- Kits and Lamps
- Niche and Misc. Products
- Non-SSL Technologies
- Dimmable Lamps
- Definitional Clarifications
- Removable/Replaceable Lamps
- Warranty
- Pre-Set Drivers to Manage Lumen Depreciation Over Time
- Dimming Performance
- Remote Phosphor
- AC LEDs
- Testing Large Products
- Flicker
- Surge Protection
- Lab Accreditation
- Ambient Temperature Testing
- Multiple Sourcing of LEDs
- Color Tuning
- Expansion to Family Grouping
- Strict Worst Case Rules
- Rules on Aimable Products
- Thermal Fold-back
- Pre-Set Drivers to Manage Lumen Depreciation Over Time
- Multiple, Unknown LED Variations Within a Product
- Safety Certification

Balancing Needs



Establish Predictable Schedule for Spec Revisions

- Increase transparency
- Provide signal to market
- Increase opportunity for input





Maintain Up-To-Date Performance Data

- Listing accuracy
- Phase out discontinued products

Drive Efficacy AND Quality

- Ensure current metrics remain relevant in the market
- Define “quality” metrics
- Create system of Allowances for products with special features





Consider Opportunities to Reduce Testing Burden

- Relevant metrics
- Increased flexibility
- Accommodation for versatility

Enable Product Selection

- Translate luminaire level performance to the application setting
- Additional metrics?
- Design guidance?



Attend Discussion Sessions for More Info

Wednesday, 10:30 - Noon

- SSL Category and PUD Development (Onyx)
- Allowances for Unique Applications (Ballroom A)
- DC/PoE Lighting (Ballroom B)



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Networked Lighting Control Specs

First Networked Lighting Control Spec Published April 21, 2016



Networked Lighting Control Systems Specification

Version 1.01

Issued April 21, 2016

Revised May 6, 2016

Schedule of Revisions

Revision Number	Date	Description
1.0	April 21, 2016	<ul style="list-style-type: none"> Initial Specification Published
1.01	May 7, 2016	<ul style="list-style-type: none"> Clarified that the specification is for Interior Control Systems. Systems designed and marketed exclusively for exterior applications are not eligible to be qualified.

This document defines requirements to be met or reported for lighting control systems listed on the DesignLights Consortium™ (DLC) Networked Lighting Controls Qualified Products List (QPL).

Scope of Specification

This is a specification for Interior Networked Lighting Control systems. Such systems are defined for the purposes of this specification as the combination of sensors, network interfaces, and controllers that effect

'Required' System Capabilities

- *Networking of Luminaires and Devices*
- *Occupancy Sensing*
- *Daylight Harvesting*
- *High-End Trim*
- *Zoning*
- *Luminaire and Device Addressability*
- *Continuous Dimming*

'Reported' System Capabilities

- *Type of User Interface*
- *Luminaire Level Control*
- *Integrated Luminaire Level Control*
- *Localized Processing / Distributed Intelligence*
- *Scheduling*
- *Personal Control*
- *Load Shedding (DR)*
- *Plug Load Control*
- *Other Building Systems Integration*
- *Energy Monitoring*
- *Device Monitoring / Remote Diagnostics*

A Framework for the Future

- Flexible structure supports evolving technology and varying utility program needs
- Equips utilities with key resource to scale up support of technology
- Provides a resource to the market to understand, evaluate, and compare control systems

First NLC QPL Published June 27, 2016

 Networked Lighting Control QPL Qualified Systems Summary Information Instructions * Press <input type="text"/> to filter list by company, brand, system name, or characteristic.								
Company	Brand	Name of Control System	Technical support phone number	Scope/Scale of System (Room, Whole Building, Enterprise)	Product Website	System/Component Warranty	If the system is available in some configurations that meet the DLC specification, and other configurations that do not meet the specification, what components or combinations are necessary to meet the specification?	Case studies available?
RAB Lighting	Lightcloud	Lightcloud	844.LIGHTCLOUD	Room level solution, whole building level solution, and enterprise solution	lightcloud.com and http://www.rabweb.com/lightcloud-di.php	10 Years	1 or more LCGATEWAY for networking, high end trim, continuous dimming. 1 or more LCDAYLIGHT for daylight harvest. 1 or more LCSENSE15/D10 for occupancy control. 1 LCCONTROL20/D10 or LCSENSE15/D10 per luminaire for addressability & zoning. 1 or more browser interface device to adjust settings (tablet, mobile, computer).	no cases studies are currently available
Enlighted Inc	Enlighted	Enlighted	1-855-874-1692	Room level solution, whole building level solution and enterprise solution.	www.enlightedinc.com	5 Years	System meets all DLC Specifications in all configurations.	https://newbuildings.org/sites/default/files/NEEA_Enlighted_Report.pdf

QPL Status

Qualified Systems

The logo for enlightened, featuring the word "enlightened" in a lowercase, red, sans-serif font.The logo for RAB LIGHTING, with "RAB" in a large, bold, red, sans-serif font and "LIGHTING" in a smaller, blue, sans-serif font below it.

Systems under Review

The logo for AcuityBrands, featuring a red swoosh followed by the text "AcuityBrands" in a grey, sans-serif font.The logo for CREE, featuring the word "CREE" in a bold, blue, sans-serif font followed by a blue diamond-shaped symbol and a trademark symbol.The logo for EATON, featuring the word "EATON" in a bold, blue, sans-serif font.

Powering Business Worldwide

The logo for nedap, featuring an orange star symbol followed by the word "nedap" in a lowercase, grey, sans-serif font.The logo for PHILIPS, featuring the word "PHILIPS" in a bold, blue, sans-serif font.

DLC Members that will require Systems to be on NLC QPL in 2016 or 2017*



*Based on Survey Responses from 55% of DLC Members

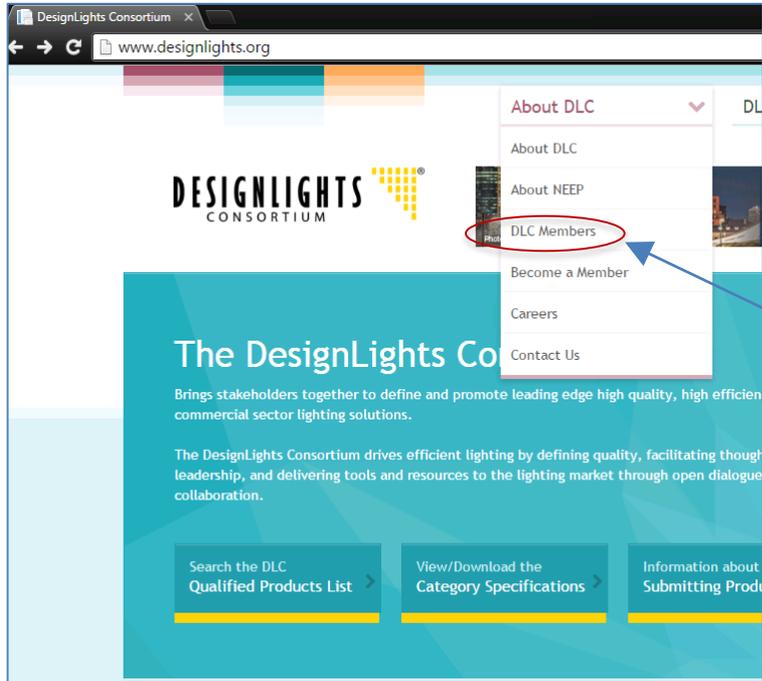
DLC Members launching specialized programs/rebates for NLCs



DLC Members actively *considering* specialized programs/rebates for NLCs



Where to find this information



Newly Updated **Member Program Summary** on 'DLC Member' page includes information on programs/incentives available from DLC Members.

- Incentive types/amounts
- Incentives for DLC Premium
- Current and planned use of Networked Lighting Control QPL

Networked Lighting Controls Revision Cycle

Specification Revised Annually every
June 1

Revision process begins every February
to allow time for stakeholder input

One Year Grace Period



From Capabilities to Performance of Capabilities



Add more specific capability performance requirements

- Example: Requirements for how 0-10V dimming is implemented following forthcoming ANSI C137 0-10V Standard

Verification: Add Performance Testing over Time



- Support development of testing standards
- Explore “Test Room” Concept
- Adopt applicable standards that are completed
 - Example: Nearly completed ANSI C137 0-10V Standard

Develop Requirements for Exterior Controls

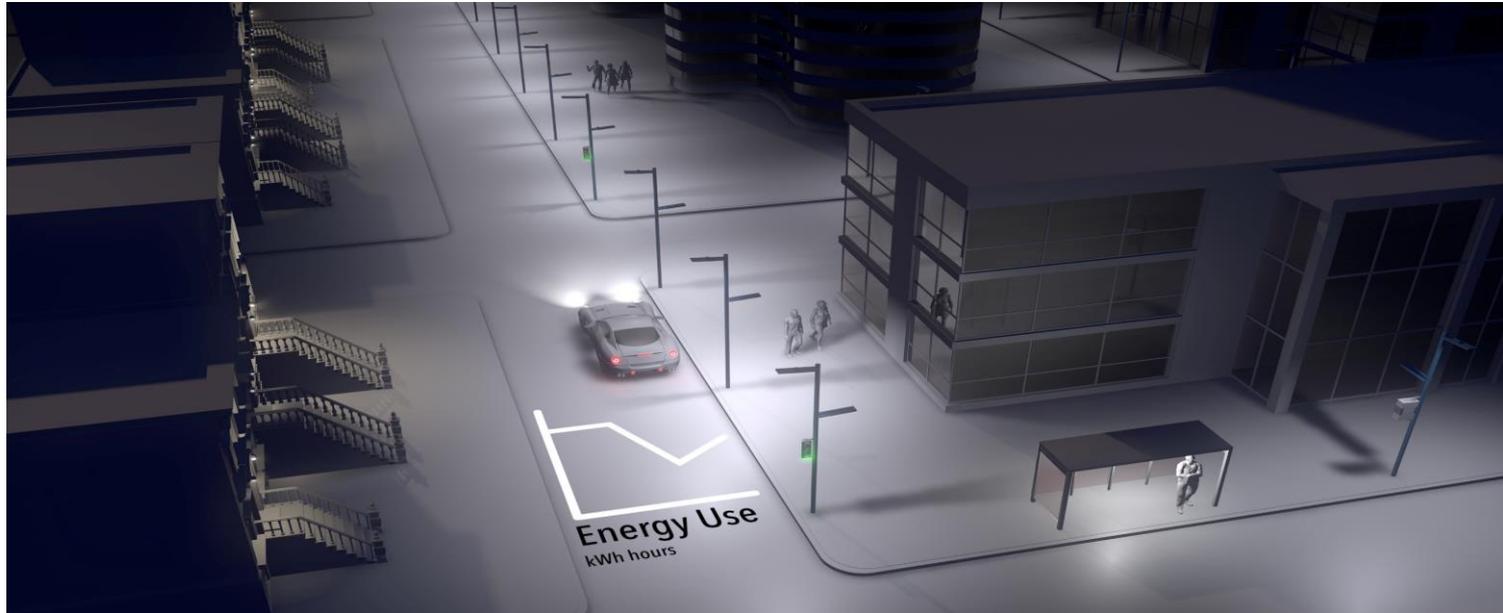
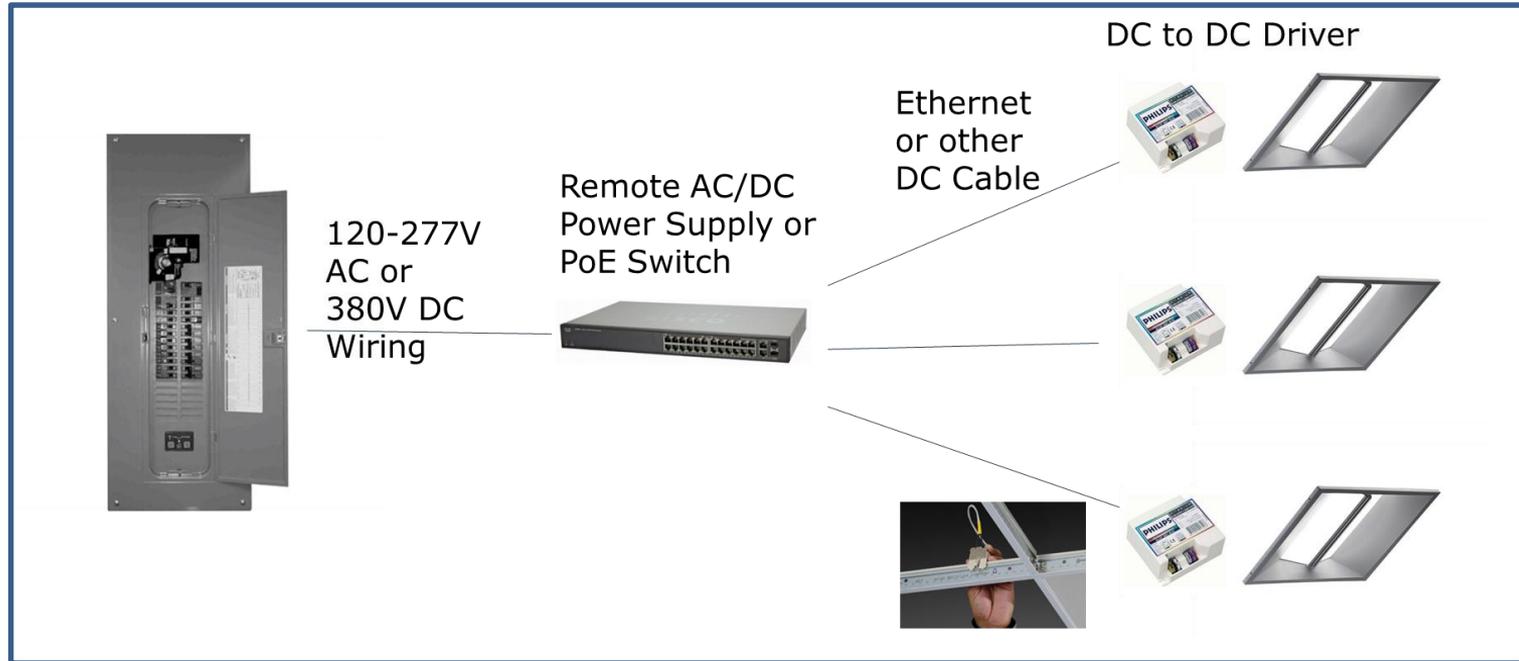


Image Credit: DOE

Spec Requirements for DC and PoE



Support Utility Implementation of Specs

- Develop guidance for where/when spec requirements are required at the project level
 - Individual luminaire addressability
 - Occupancy Sensing
 - Daylight Harvesting
 - High-End Trim

Promote QPL as a Product Selection and Comparison Tool

'Required' System Capabilities

- Networking
- Occupancy Sensing
- Daylight Harvesting
- High-End Trim
- Zoning
- Luminaire and Device Addressability
- Continuous Dimming

**Understand, Evaluate,
Compare Control Systems**

What capabilities?

How?

Wired? Wireless?

'Optional' System Capabilities

- Type of User Interface
- Luminaire Level Control
- Integrated Luminaire Level Control
- Localized Processing / Distributed Intelligence
- Scheduling
- Personal Control
- Load Shedding (DR)
- Plug Load Control
- BMS/EMS/HVAC Integration
- Energy Monitoring
- Device Monitoring / Remote Diagnostics

BMS/EMS Compatible?

**Open Standard?
Proprietary?**

**Stand-Alone, Local
Server, or Cloud?**

**Case
Studies?**

**Energy
Monitoring?**

OpenADR Compliant?

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- DC and PoE Lighting (Ballroom B)
- Networked Lighting Control Specification Development: 2017 (Lodo)



2016

STAKEHOLDER MEETING

Q&A with DLC
Member Programs



Panelist

Chris Wolgamott
Senior Product Manager
Northwest Energy Efficiency Alliance



Panelist

Rishi Sondhi

Product Management and Marketing
Eversource



Panelist

Jackie Ducharme
Product Portfolio Manager
Xcel Energy

DLC recently unveiled the Premium Tier for SSL (V3.0) and announced significantly increased efficacy requirements (V4.0) that will take full effect in April 2017. How are these changes impacting your programs now and in the future? Do you plan to use the Premium Tier? Is it important that DLC continues to raise the efficacy bar?

In June, DLC launched the Networked Lighting Control QPL. How do you see the current and future role of Lighting Controls in your programs? How do you plan to use the DLC Networked Lighting Control QPL?

As the market and technology continue to evolve, how do you see your program evolving in the next 3-5 years with respect to DLC?

In the next few years, what would you would like to see from manufacturers? (Products, performance, services, participation, etc.)