

DLC Spec May Lead to Networked Control Rebates

By Craig DiLouie, CLCP, LC

A new Qualified Products List (QPL) for Networked Lighting Controls is likely to lead to availability of rebates rewarding installation of networked lighting controls. Launched in May 2016, the DesignLights Consortium's (DLC's) QPL for Networked Lighting Controls provides a list of products that satisfy certain criteria.

Networked Lighting Controls

Networked lighting controls consist of systems in which luminaires and devices are addressable within a network. This allows functional programming and zoning of individual devices and the system as a whole from a single point. Otherwise, the system switches and continuously dims to enact control strategies such as occupancy sensing, daylight harvesting and institutional task tuning.

Controllers may be remote or integrated within luminaires. Intelligence may be centralized, or it may be distributed using local microprocessors. Some systems enact extended strategies such as time scheduling, demand response, personal control and plug-load control. Some provide data retrieval capabilities such as energy monitoring, device monitoring and remote diagnostics. And some can integrate with HVAC and other building systems.

The result is extraordinary functionality, programmability, flexibility, and information collection. These features in turn can result in higher energy savings, energy analysis, more-efficient maintenance and easier management and installation.

Networked lighting controls currently control about one to two percent of the national lighting stock, according to the Department of Energy (DOE) and Navigant Consulting. Perceived cost and complexity hampered early adoption. By 2035, however, DOE estimates connected lighting and controls will account for one-third of energy savings resulting from LED lighting. Memoori recently forecasted intelligent lighting controls will grow at a 12 percent CAGR through 2020.

A big driver behind this demand will be accelerated adoption of LED lighting in new and existing construction. In existing buildings, installation of LED lighting is an ideal time to consider installing networked lighting controls, particularly when luminaires are connected using wireless communication.

Rebates and Networked Controls

Prior to 2017, very few rebates support adoption of networked lighting controls. For existing construction, owners justify installation based on total energy savings resulting from a comprehensive LED upgrade. Installation is more economical because labor resources are already on site.

Because networked lighting controls promise higher energy savings than conventional control solutions, ideally utility rebates would favor them. Rebates reduce the installed cost of new lighting and controls. According to BriteSwitch, they can improve payback by 20–25 percent, which would reduce a two-year payback to about 1.5 years. Many utilities qualify LED products by requiring listing with the DesignLights Consortium's Qualified Products List.

Regulators are tasking rebate managers to reduce energy consumption beyond energy code baselines. As a result, rebate managers are turning to higher-efficiency LED lighting and networked controls. To support networked lighting controls in their programs, they need to identify quality products, reliably estimate energy savings, and train trade allies and users.



1930 Baseline Rd.
Grand Island, NY 14072
716-775-9138
sales@entuit.com

DLC QPL for Networked Controls

In response, the DesignLights Consortium, which represents some 100 utilities and energy efficiency programs in the U.S. and Canada, published Networked Lighting Control Systems Specification v.1.01. The specification forms the basis of qualification for inclusion on the organization's QPL for Networked Lighting Controls. Utilities and energy efficiency programs use the lighting QPL to identify LED products to support in their programs.

The specification is based on "required" and "reported" system capabilities to capture the breadth of solutions available on the market.

Required system capabilities include:

Networking of luminaires and devices

Luminaire and device addressability

Continuous dimming

Occupancy sensing, daylight harvesting, high-end trim

Zoning

The system must also be commercially available. A minimum five-year warranty must cover all components in the specification.

Reported capabilities include:

Luminaire-level control (integrated or not)

Time-scheduling, load-shedding, personal and plug-load control

Localized processing (distributed intelligence)

BMS/EMS/HVAC integration

Energy monitoring

Device monitoring/Remote diagnostics

Type of user interface

Operational and standby power

According to DLC, about 40 systems currently on the market may be eligible to satisfy the specification and gain listing. As of September 6, 2016, the following products achieved listing:

Eaton's LumaWatt Pro

Enlighted's Enlighted system

Nedap's Luxon

RAB Lighting's LightCloud

DLC members and other energy efficiency programs are expected to develop rebate programs around the specification and QPL. Some were expected to launch in the second half of 2016, while others are launching in 2017.