Moderators

Gabe Arnold

DLC

Irina Rasputnis

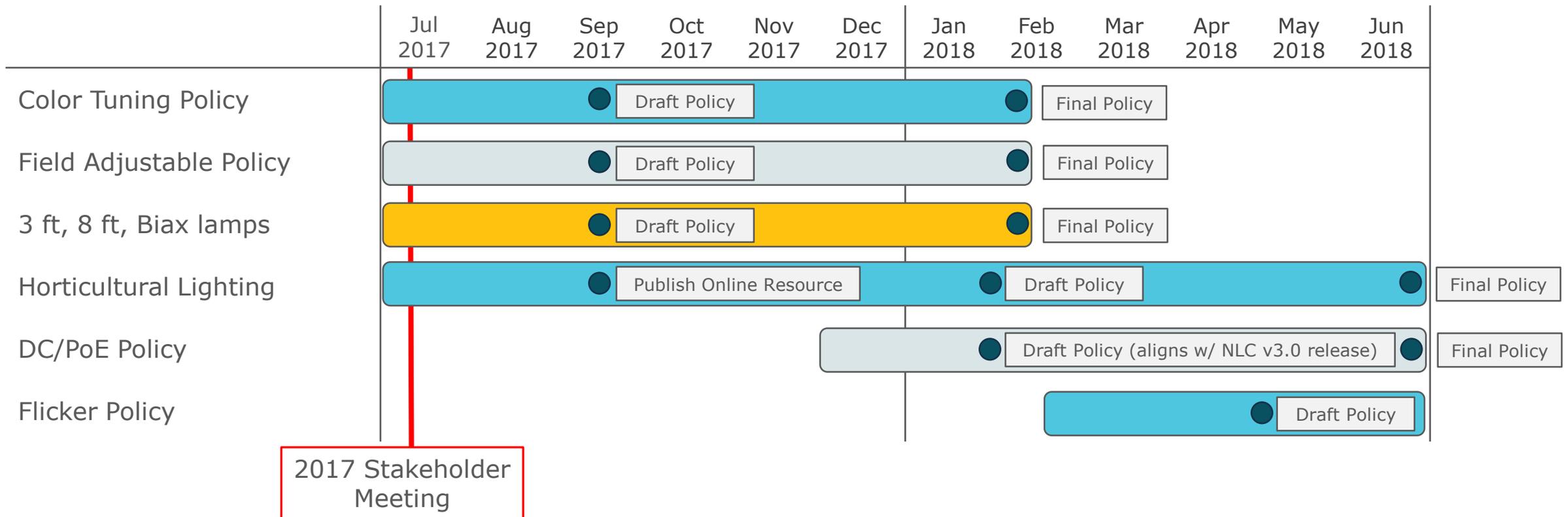*DLC*

DLC Technical Workplan

DLC Technical Workplan

- Continually updated 12-18 month implementation plan on DLC technical activities and requirements

- Schedule and Milestones published to DLC website in August 2017

- Provide greater transparency and predictability to DLC activities and future requirements
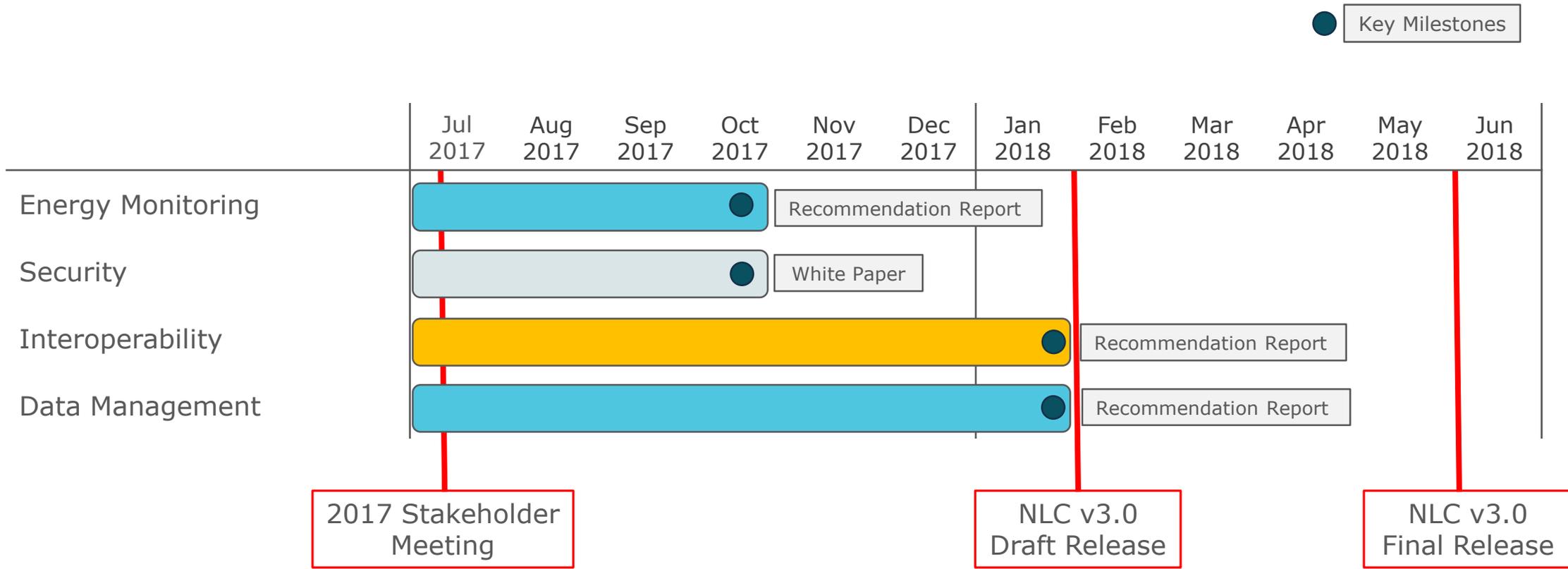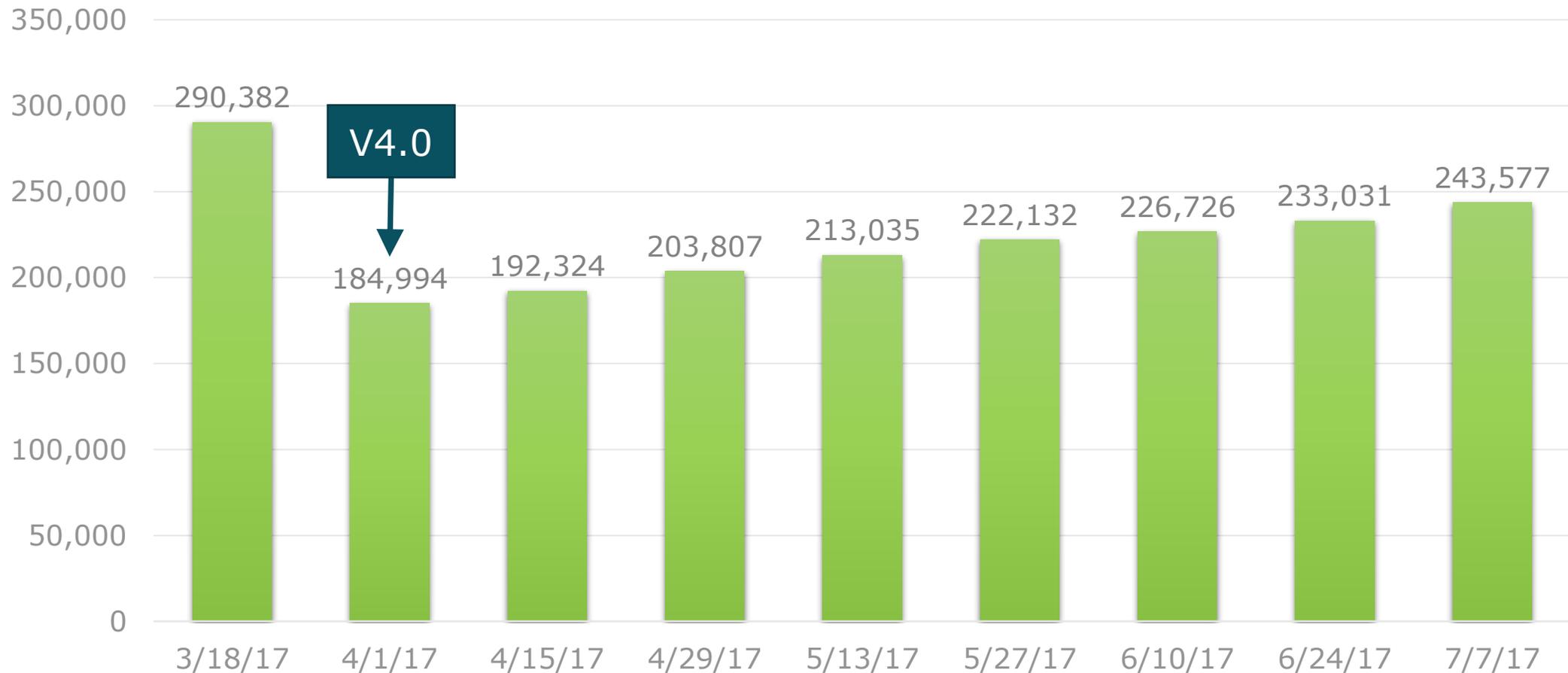
SSL Workplan*

Key Milestones

	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018

- Color Tuning Policy — Draft Policy / Final Policy
- Field Adjustable Policy — Draft Policy / Final Policy
- 3 ft, 8 ft, Biax lamps — Draft Policy / Final Policy
- Horticultural Lighting — Publish Online Resource / Draft Policy / Final Policy
- DC/PoE Policy — Draft Policy (aligns w/ NLC v3.0 release) / Final Policy
- Flicker Policy — Draft Policy

2017 Stakeholder Meeting

*Dates are approximate

Networked Controls Workplan*

Key Milestones

	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018

Energy Monitoring — Recommendation Report

Security — White Paper

Interoperability — Recommendation Report

Data Management — Recommendation Report

2017 Stakeholder Meeting

NLC v3.0 Draft Release

NLC v3.0 Final Release

*Dates are approximate
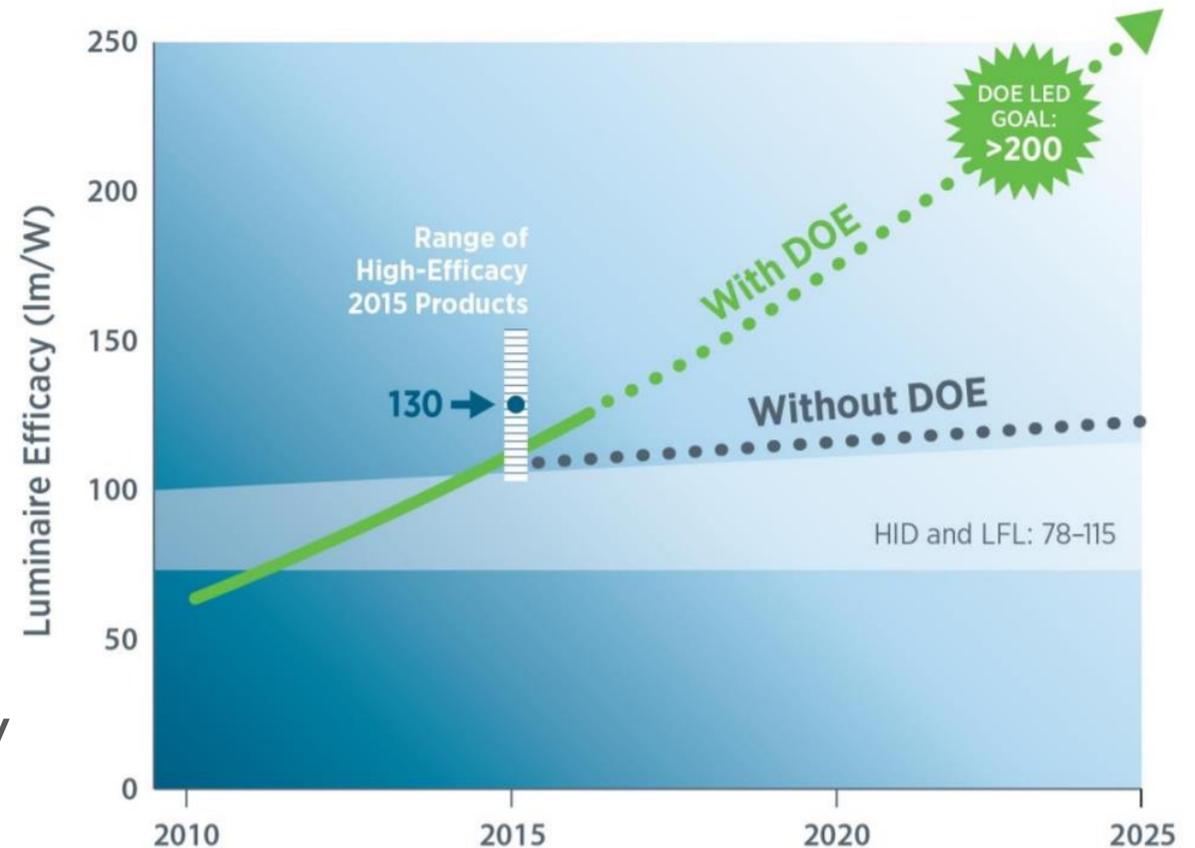
SSL QPL Update

SSL QPL Product Update

The Next Big Revision?

- DLC is developing a predictable major revision schedule

- Published on DLC website (soon)

- Significant advanced warning of upcoming revision and focus areas

Considerations

- Focus on efficacy?
  - Trajectory of efficacy improvements
  - Cost and market implications
  - Lighting quality impacts
- Focus more on controls integration? Bridge QPLs?
- Focus more on lighting quality and system capabilities?
- Something else?

Source: DOE Solid State Lighting R&D Plan, June 2016

Networked Controls QPL Update

Version 2.0 Requirements now Live!

Feb 2
Draft 1 Released

Mar 23
Controls Summit

May 17
Draft 2 Comments Due

June 1 Final V2.0 Requirements Published

Mar 8
Draft 1 Comments Due

Apr 12
Draft 2 Released

Interior

"Required" Interior System Capabilities

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

"Reported" Interior System Capabilities

- Control Persistence
- Scheduling
- Energy Monitoring
- Device Monitoring / Remove Diagnostics
- Type of User Interface
- Luminaire Level Lighting Control (LLLC, integrated)
- Personal Control
- Load Shedding (DR)
- Plug Load Control
- External System Integration
- Emergency Lighting
- Security
- Color Changing / Tuning
- Start-Up and Configuration Party

Exterior

"Required" Exterior System Capabilities

- Networking of Luminaires and Devices
- Occupancy Sensing AND/OR Traffic Sensing
- Photocell Control
- High-End Trim
- Scheduling
- Zoning
- Luminaire and Device Addressability
- Continuous Dimming

"Reported" Exterior System Capabilities

- Control Persistence
- Energy Monitoring
- Device Monitoring / Remove Diagnostics
- Type of User Interface
- Load Shedding (DR)
- External System Integration
- Emergency Lighting
- Security
- Color Changing / Tuning
- Start-Up and Configuration Party

Networked Lighting Control QPL: Qualified Systems by Capability

Instructions
* Press ▾ to filter list by company, brand, system name, or capability.
* Hover mouse pointer over column heading for description of capability.

Company	Name of Control System	Networked?	Wired / Wireless / Both	Occupancy Sensing?	Daylight Harvesting?	High-End Trim?	Scheduling?	Personal Control?
Acuity Brands	nLight Air®	Yes	Wireless	Yes	Yes	Yes	No	Yes
Acuity Brands	nLight®	Yes	Wired and wireless	Yes	Yes	Yes	Yes	Yes
Acuity Brands	XPoint Wireless	Yes	Wired and wireless	Yes	Yes	Yes	Yes	Yes
Autani, LLC	Energy Center	Yes	wired and wireless	Yes	Yes	Yes	Yes	Yes
Cree, Inc.	SmartCast® Technology	Yes	Wireless	Yes	Yes	Yes	No	Yes
Crestron Electronics	Crestron DALI	Yes	wired and wireless	Yes	Yes	Yes	Yes	Yes
Daintree Networks, Current powered by GE	Controlscope	Yes	Wireless	Yes	Yes	Yes	Yes	Yes
Digital Lumens	Lightrules	Yes	Wired and wireless	Yes	Yes	Yes	Yes	Yes
Eaton	LumaWatt Pro	Yes	Wired and wireless	Yes	Yes	Yes	Yes	Yes
Enlighted Inc	Enlighted	Yes	Wired and wireless	Yes	Yes	Yes	Yes	Yes
IDEAL INDUSTRIES, INC.	Audacy® Advanced Wireless Solutions	Yes	Wireless	Yes	Yes	Yes	Yes	Yes
Lutron Electronics	Quantum Total Light	Yes	wired and wireless	Yes	Yes	Yes	Yes	Yes

19 Systems Qualified

✔ Acuity nLight Air
✔ Acuity nLight
✔ Acuity Xpoint Wireless
✔ Autani Energy Center
✔ Cree Smartcast
✔ Crestron DALI
✔ Daintree GE Controlscope
✔ Digital Lumens Lightrules
✔ Eaton LumaWatt Pro
✔ Enlighted
✔ Ideal Audacy
✔ Lutron Quantum
✔ Lutron Vive
✔ Magnum OPUS
✔ Nedap Luxon
✔ OSRAM Encelium
✔ Philips SpaceWise
✔ Philips EasySense SNS200
✔ RAB Lightcloud

15

Programs that Require Networked Controls to be DLC Qualified

With Special Promotions	No Special Promotions Yet
Baltimore Gas & Electric (BGE)	Efficiency Smart (OH)
Con Edison	Efficiency Nova Scotia
Efficiency Maine	Eversource (CT)
Efficiency Vermont	FortisBC
Eversource (MA)	Hydro-Québec
National Grid (MA, RI, NY)	New Hampshire Saves
Southern Maryland Electric Cooperative	Public Service Company of New Mexico
United Illuminating Company	Sacramento Municipal Utility District
Wisconsin Focus on Energy	SaskPower
Idaho Power (starting 2018)	Xcel Energy (Colorado)
Pacific Gas & Electric (starting 2018)	Xcel Energy (Minnesota)
	Xcel Energy (South Dakota)
	Reading Municipal Light Dept. (MA)

16

*Based on survey data from approximately 45% of DLC Members

Where to Find Program Information

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

Q&A with Efficiency Programs

Panelists

**Kyle
Hemmi**

CLEAResult

**Peter
Jacobson**

Con Edison

**Jeffrey
Schwartz**

ICF

What are the key challenges and opportunities within your programs right now with respect to commercial lighting?

DLC's Networked Lighting Control QPL is now well established with V2.0 requirements completed and 19 systems listed. Could you share your perspective on the role of advanced lighting control technologies within your programs now and into the future?

Lighting is evolving from simple widgets to full systems that offer increasing benefits and capabilities that extend beyond lighting, including productivity, light and health, asset tracking, wayfinding, traffic management, and more. Utilities often refer to these benefits as "NEBs" or Non-Energy Benefits. How is this evolution of lighting impacting you, and what do you see as the role of NEBs in Efficiency Programs now and in the future?

Thank You!

Irina Rasputnis
Moderator

Gabe Arnold
Moderator

Kyle Hemmi
CLEAResult

Peter Jacobson
ConEd

Jeffrey Schwartz
ICF

TLEDs currently represent the single largest product category on DLC's SSL QPL and many Efficiency Programs report widespread use on projects. With concerns about safety and performance, missed opportunities, and following a handful of recalls, efficiency programs have mixed opinions on this technology. What is your perspective on the current and future role of TLEDs in your programs?