



Energy · Quality · ControllabilitySM

Make the Savings Real!

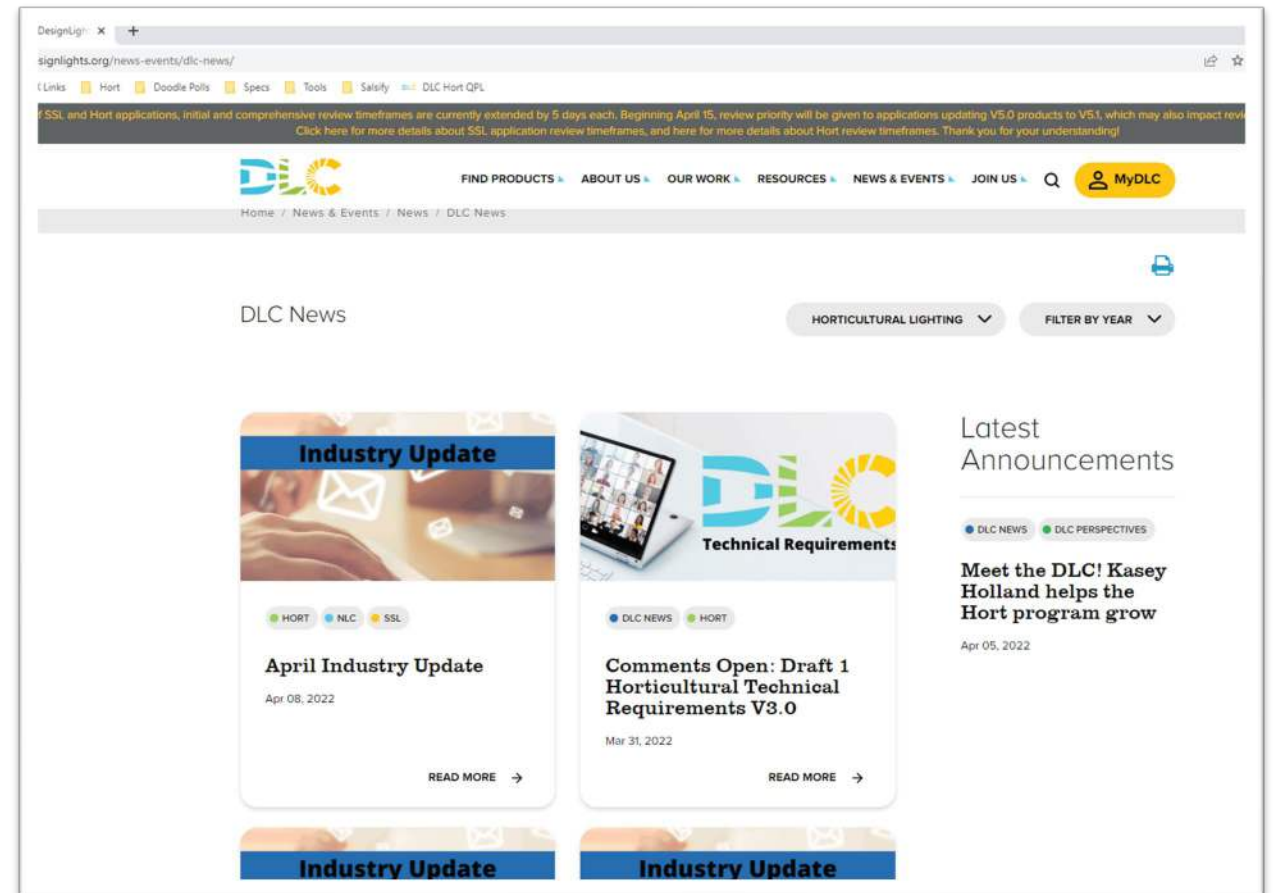
With a Standardized Networked Lighting Controls Configuration Report

October 8, 2025

designlights.org

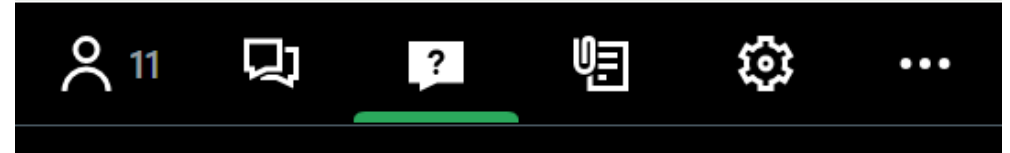
Welcome!

- **Slides and recorded webinar will be posted** on the *DLC News & Events* page at <https://designlights.org> shortly after today's presentation
- All attendees are automatically muted



Webinar Orientation

- Questions will be held until the end during a live Q&A
 - Use the Question pane (not Chat) to submit for Q&A





The DesignLights Consortium is an independent, nonprofit organization providing decision makers with data and resources on quality lighting, controls, and integrated building systems to reduce energy, carbon, and light pollution.

New NLC ANSI Standard



NEMA/ANSI C137.9 Indoor Networked Lighting Control Systems Configuration Report

Initiated: September 2021
Approved: December 2024
Published: March 2025



C137.9-2024

*American National Standard for Lighting Systems—
Indoor Networked Lighting Control Systems Configuration Report*

Secretariat:

National Electrical Manufacturers Association

Approved: December 5, 2024

American National Standards Institute, Inc.

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Working Group Members

- Ruth Taylor – PNNL (Co-Chair)
- Michael Davidson – Synapse (Co-Chair)
- Harold Jepsen - Legrand
- Yao Jung Wen – Energy Solutions
- Chris Wolgamott - NEEA
- Brian Woodbury – LightSmart Energy Consulting
- Bob Hamlin – Acuity Brands
- Robert Spehalski – Lutron
- Jason Jeunnette – DesignLights Consortium



Why Are NLC Settings Important?



Regulatory Requirements for Efficiency Programs

- Utilities require approval from regulators to invest in expansion
- Energy efficiency encouraged because it is far less expensive than adding generation capacity (avoided cost)
- Regulators Assign goals for:
 - Electric and Gas savings
 - Emissions reduction/Decarbonization
 - Market transformation
 - Energy Equity and other societal benefits



Funding from Ratepayers

Investor-owned utilities are regulated

- Usually at state level (public service commission)

Policy Varies from State to State

- Most require some kind of DSM program as part of rate setting
- Goal often set as % of electric sales
 - Allowed to recover program costs for **verified** savings

Every State & Program Is Different

- 26 States have EERS
- Many other utilities have voluntary programs
- Canadian programs have different requirements
- Various levels
 - Funding
 - Policy
 - Evaluation

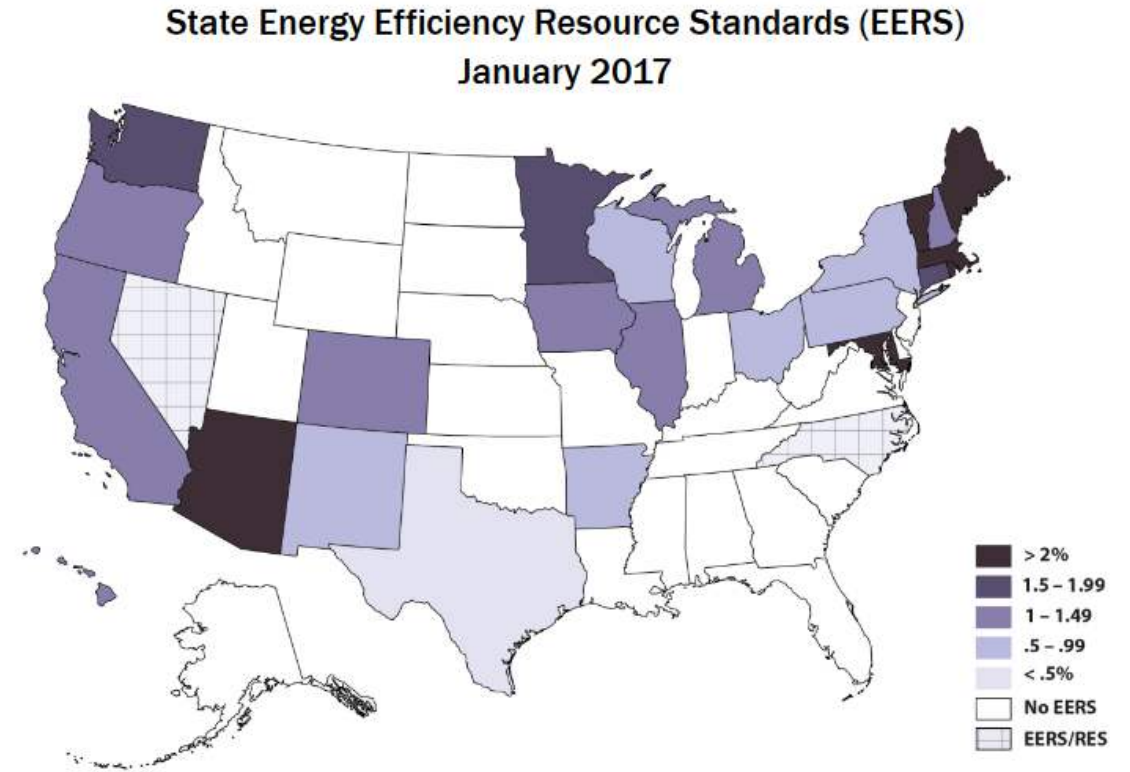
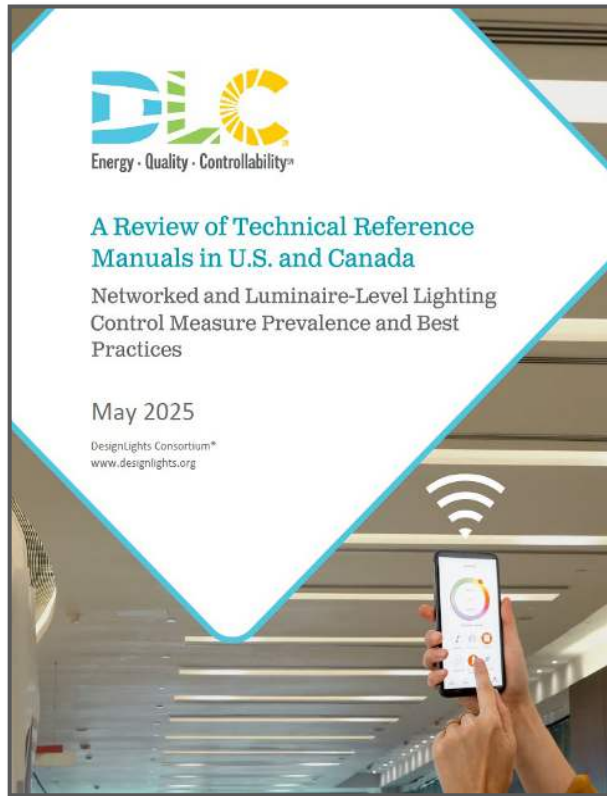


Figure 1. States with electric EERS policies in place (as of January 2017).

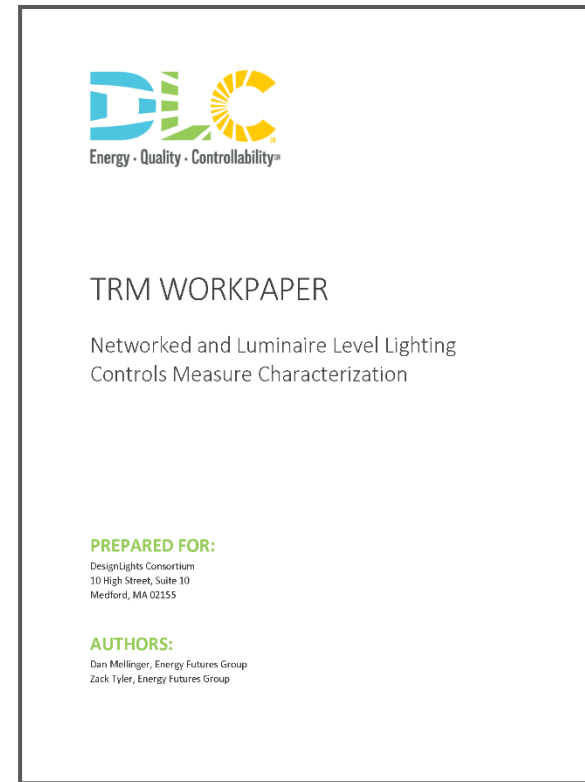
<http://aceee.org/policy-brief/state-energy-efficiency-resource-standard-activity>

Technical Resource Manuals



Review of NLC and LLLC
measures in 36 TRM's

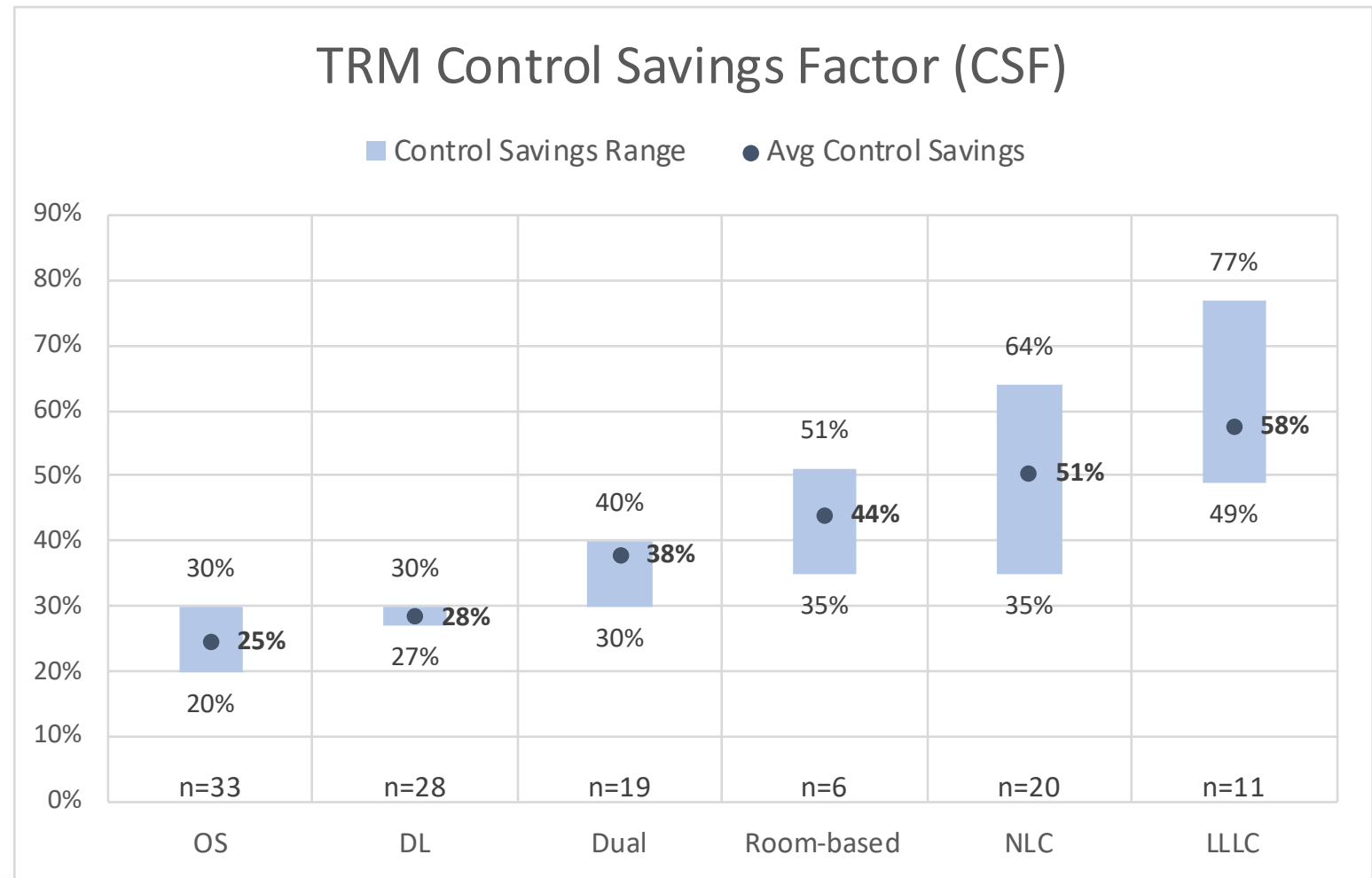
<https://designlights.org/news-events/news/lighting-controls-and-technical-reference-manuals/>



Practical guide to optimize NLC
and LLLC in your TRM

Control Savings Factors

- CSF defines the % savings off the controlled load, due to the use of controls
- Some TRMs also define a baseline CSF, such as the pre-existing use of occupancy sensors



Program Models

- Prescriptive/Midstream \$/item purchased
 - Typically 1 for 1 replacement
 - Deemed savings in TRM (savings based on assumptions for hours and programming)
 - Fastest and easiest
- Calculated (Custom) \$/kwh
 - Based on actual equipment removed/installed
 - Actual hours of use and programming
 - Typically requires pre-approval
 - May require measurement and verification prior to payment



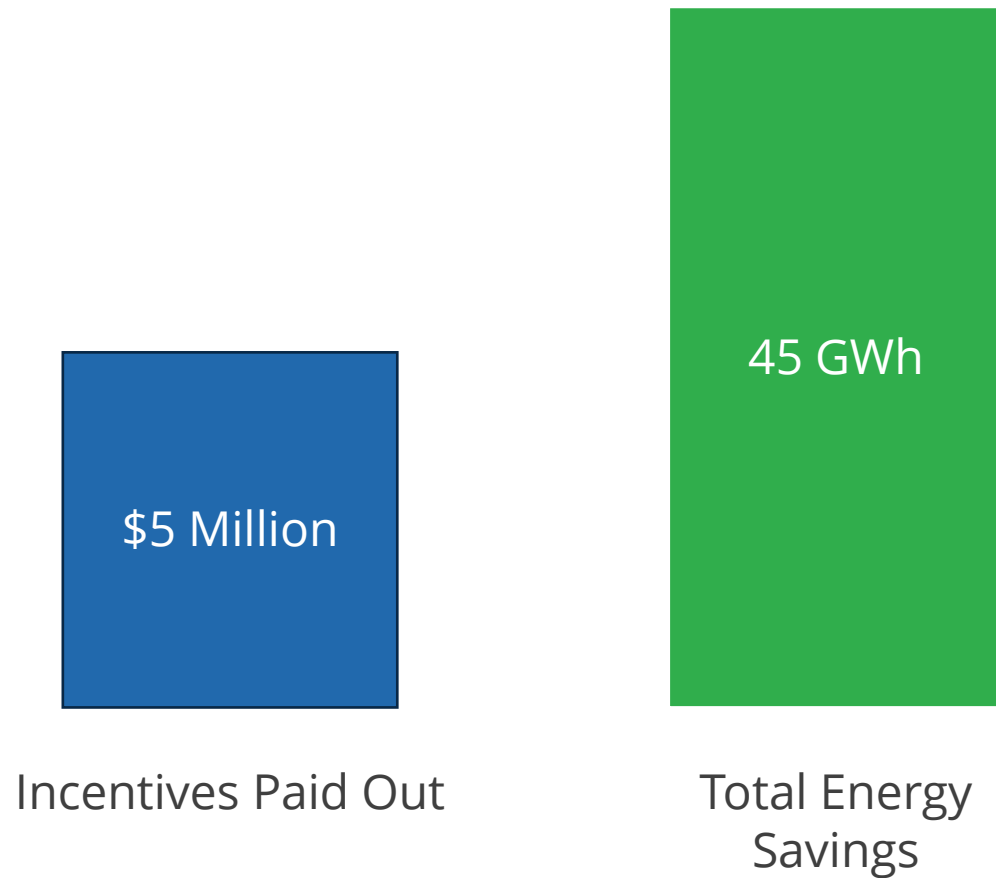
Translate to Specific Rebates

Lighting Controls Eligibility Table

Product Code	Product Description	Per-Control Incentive	Eligibility Criteria	Image
162	Remote-Mounted Dual Sensor	\$60	• This product is only available through the downstream pathway (no minimum quantity) • Sensor is remotely mounted and not integrated into the LED fixture • LED drivers must be automatically controlled using at least two of the following control strategies: - o Occupancy sensing - o Daylight dimming - o High-end trim	
163	Interior Integral Fixture Mounted Dual Sensor	\$60	• Sensor is integrated into LED fixture • LED drivers must be automatically controlled using at least two of the following control strategies: - o Occupancy sensing - o Daylight dimming - o High-end trim	
163A	Interior Integral Networked LLLC/NLC	\$70	• System must be capable of networked communication between luminaires and devices • Performance testing form must be completed at application submittal and controls must be commissioned to receive the full incentive • Projects must be designed to maximize efficiency by including all of the following strategies, where appropriate, in most or all areas: - o Zoning -Interior Troffer/Linear-Minimum zone fixture wattage of 60 Watts -High Bays-Minimum zone fixture wattage of 200 Watts <i>(Continued on next page)</i>	



Cost Effectiveness Evaluations

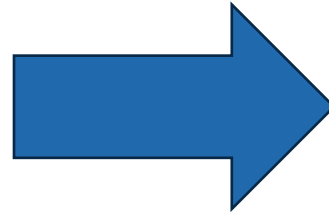


- Is the value of the Total Energy Savings more or less than the Incentives Paid Out?
- Outcome may result in positive or negative adjustments for following years.

Cost Effectiveness Evaluations



400w Metal Halide



150w LED

Cost Effectiveness Evaluations

Controls Energy Usage
Depends on:

- Programming
- Users
- Weather
- S&P 500
- Billboard Top 100



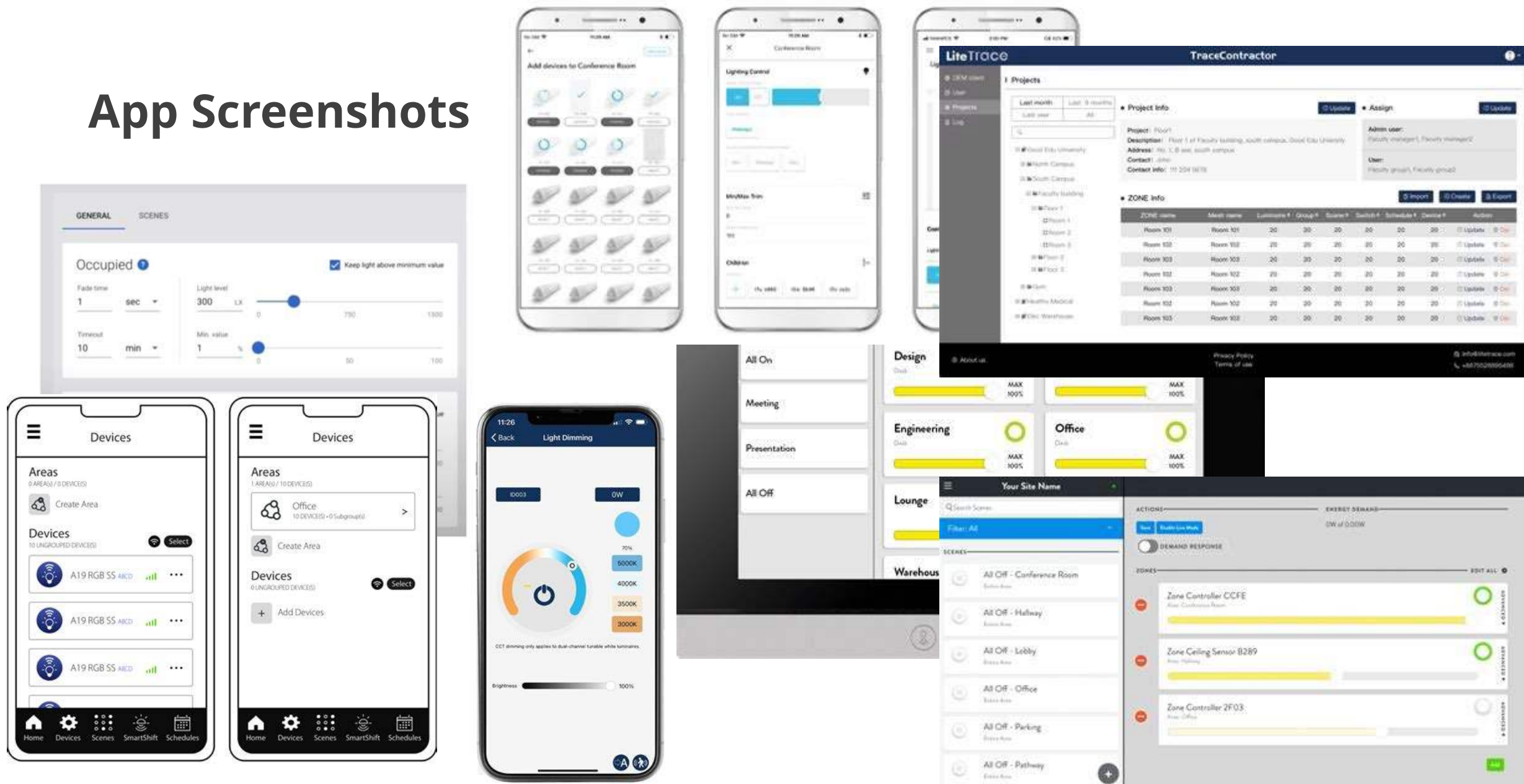


How Are NLC Settings Verified Today?

Contractor Attestations



App Screenshots



A photograph of a modern office building at night, with many windows illuminated from within, showing office interiors. A large, white, diamond-shaped graphic with a yellow border is overlaid on the left side of the image.

NEMA/ANSI C137.9

High-level overview
of NLC
**configuration
settings** for a
specific installation.



NOT Energy Use Data



Key Points

- Written with and for **EE Programs** – ensure alignment with program needs and goals
- **Reporting:** Reports generated by the NLC System or programming device.
- Reports organized by **Space Type**
- Report generation **On Demand** when the programming device is connected to the lighting network.



Example Report

EXAMPLE PDF Export—System Configuration Report

1	2	3	4	5	6	7	8	9	10	11	12	13	14
System Manufacturer: Controllery				System Name: Controllery Ignite				Project Name: Head Office				Report Generated: 11/20/2023, 11:00 a.m.	
Spaces		Quantity		Configuration						Watts Controlled (measured or user input)			
ASHRAE 90.1 Space Type	Areas in this Space Type	# of Luminaires Controlled	# of LLLC Luminaires	Daylight Harvesting Enabled	Scheduling Enabled	Occ. Sensing Enabled	Manual or Auto On	Sensor Timeout (min)	High-end Trim Level	Total Connected Load	Effective Connected Load with:		
											High-end Trim Applied	Occ. Sensing Enabled	Daylight Harvesting
Conference / Meeting / Multipurpose Room	1	5	0	N	Y	Y	M	10	85%	507	431	431	0
Conference / Meeting / Multipurpose Room	1	12	12	Y	Y	Y	M	10	85%	507	431	431	431
Corridor	1	10	10	Y	Y	N	M	5	80%	312	250	0	250
Lobby	1	3	3	Y	Y	N	M	5	80%	78	62	0	62
Office ≤300 ft²	6	25	25	Y	Y	Y	M	10	85%	780	663	663	663
Office ≤300 ft²	6	6	6	N	Y	Y	M	10	85%	780	663	663	0
Office ≤300 ft²	2	8	8	Y	Y	Y	M	5	90%	260	234	234	234
Office ≤300 ft²	2	2	2	N	Y	Y	M	5	90%	260	234	234	0
Office ≥300 ft² (Open Plan)	2	31	31	Y	Y	Y	M	10	85%	1131	961	961	961
Restroom	2	4	4	N	N	Y	A	10	80%	38	30	30	0
Stairwell	1	8	8	N	N	Y	A	5	80%	189	151	151	0
Storage Room	1	2	2	N	N	Y	A	5	80%	39	31	31	0
Storage Room	2	14	14	N	N	Y	M	5	80%	429	343	343	0
Total		130	119							3763	3156	2844	2296

Next Steps

Energy Efficiency Programs:

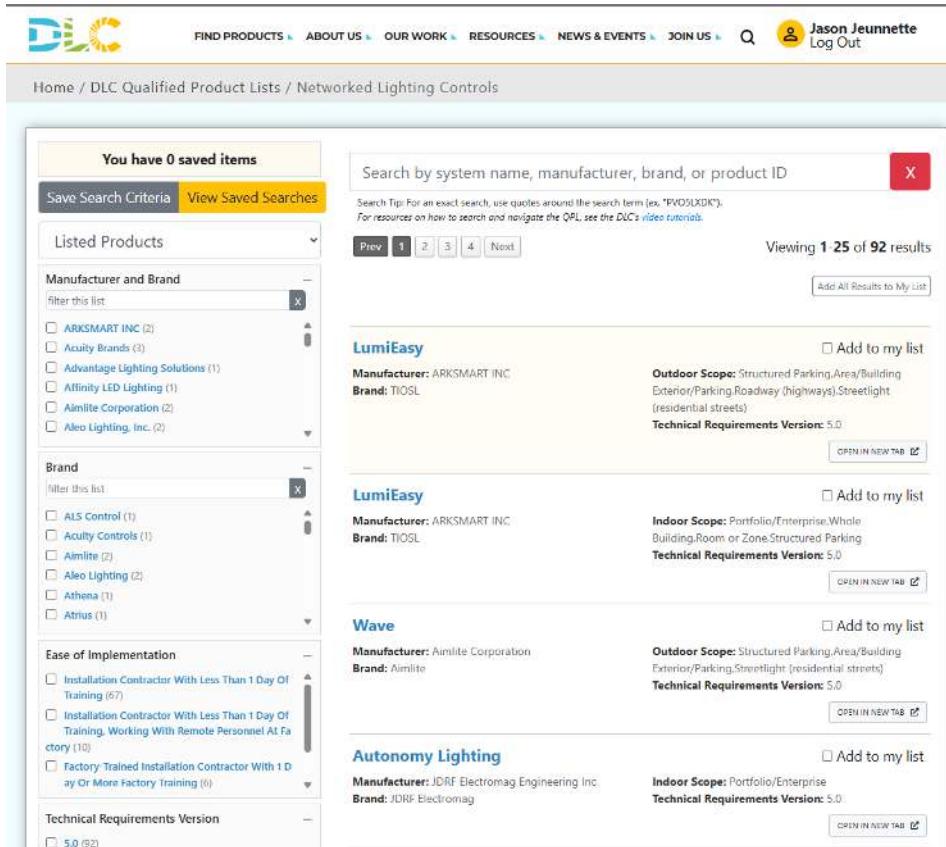
Start asking for C137.9 Reports!



NLC Manufacturers:

Add C137.9 Support to your Products!

Next Steps



2026

Add to NLC QPL as
'optional reported'

2027 or 2028

Make C137.9 support
'required reported'

Questions?

(type in question pane)

Thank You!

