



NLC-Local

Energy. Quality. Controllability.



Nonprofit
organization



Creates
performance
specifications



Provides
tools,
information,
& expertise



Accelerates
adoption of
efficient
commercial
lighting

DLC Member Utilities





Solid-State Lighting

The world's largest and most influential verified list of high-performing, energy efficient commercial LED lighting products.



LUNA

Performance criteria for outdoor lighting that minimizes light pollution, provides appropriate visibility for people, and limits negative impacts to the environment.



Horticultural Lighting

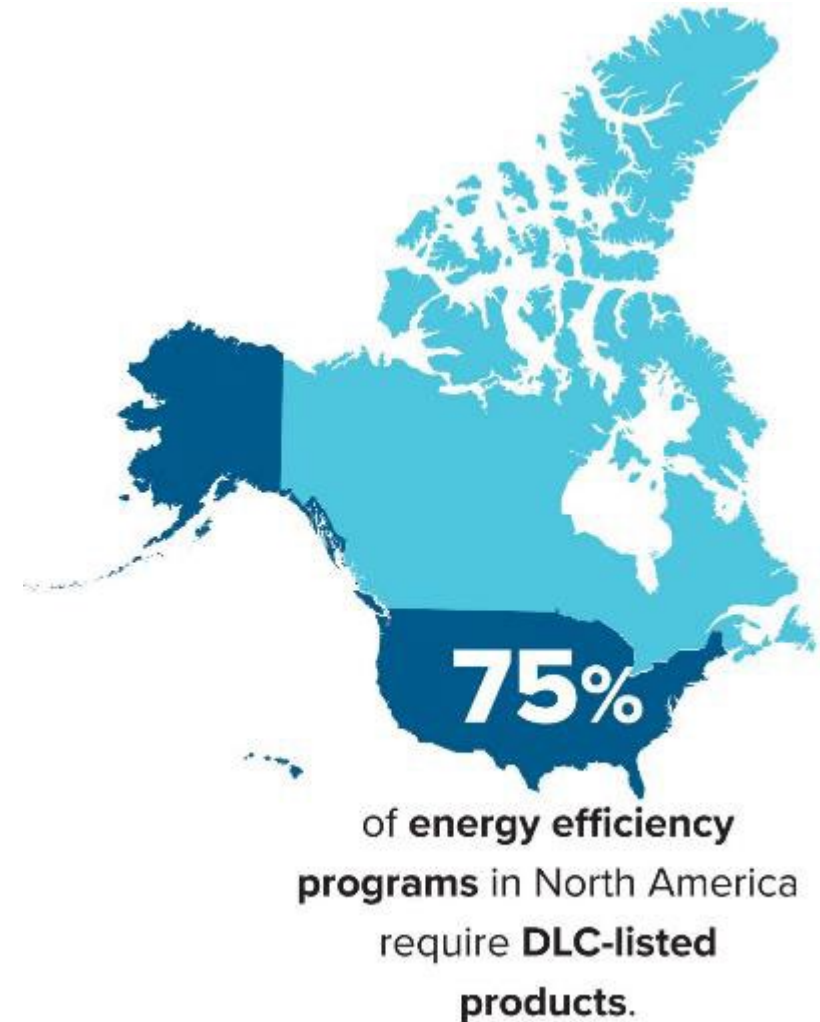
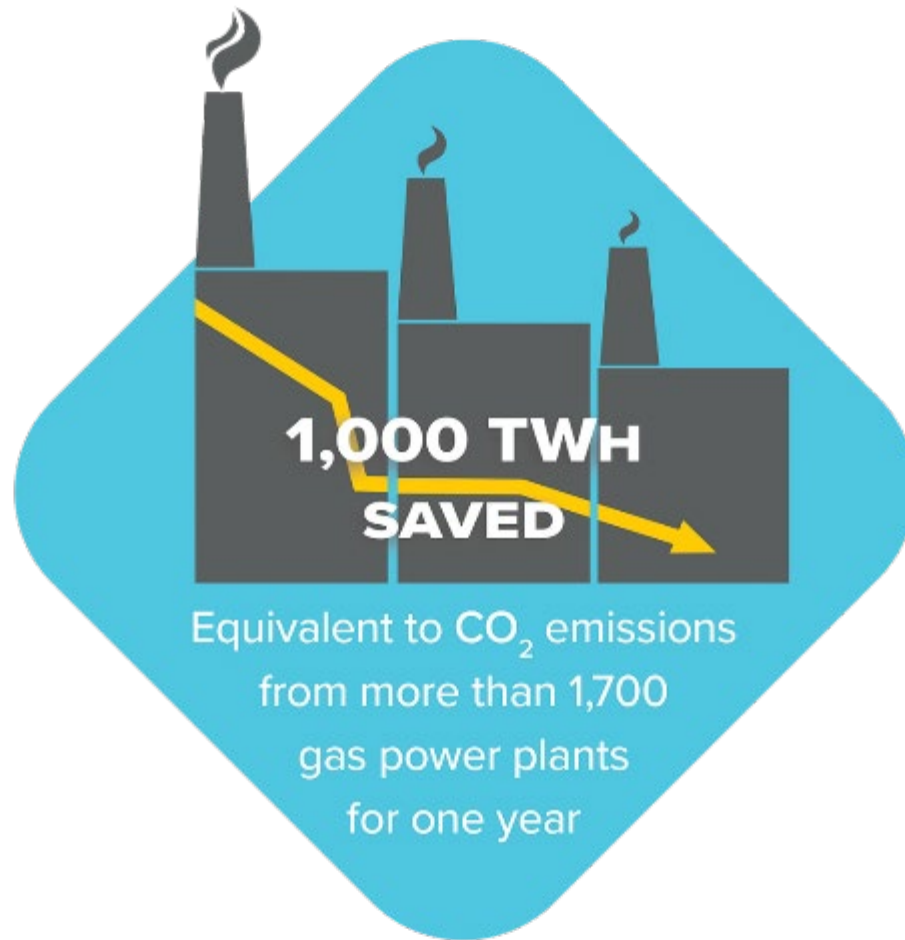
The first QPL for energy efficient horticultural lighting and industry resources to position controlled environment agriculture as a leader in energy efficiency.



Networked Lighting Controls

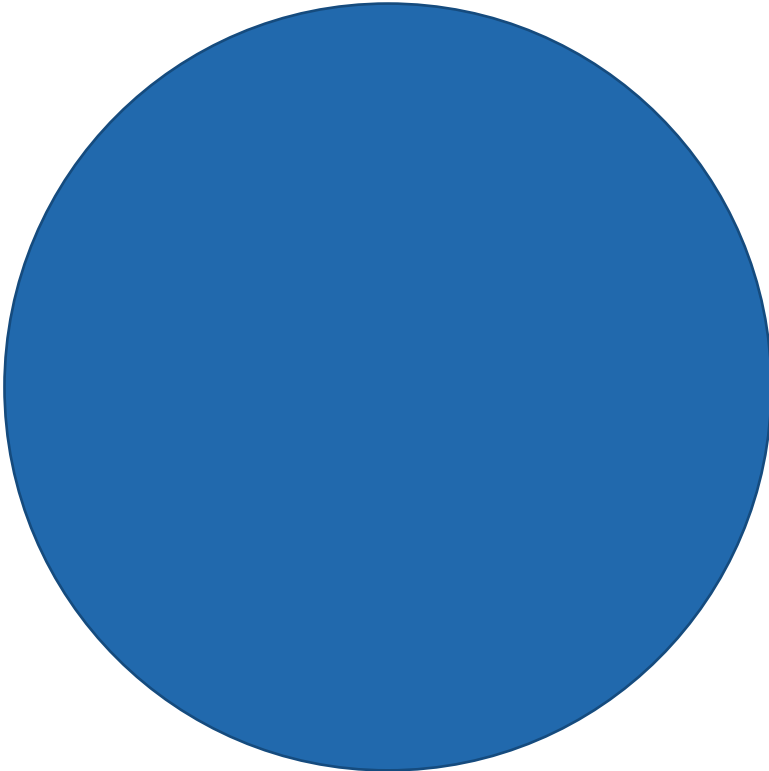
Resources to drive the widespread adoption of NLCs and promote the technology as the gateway to enabling connected buildings that support carbon reduction goals.

Decade of Impact

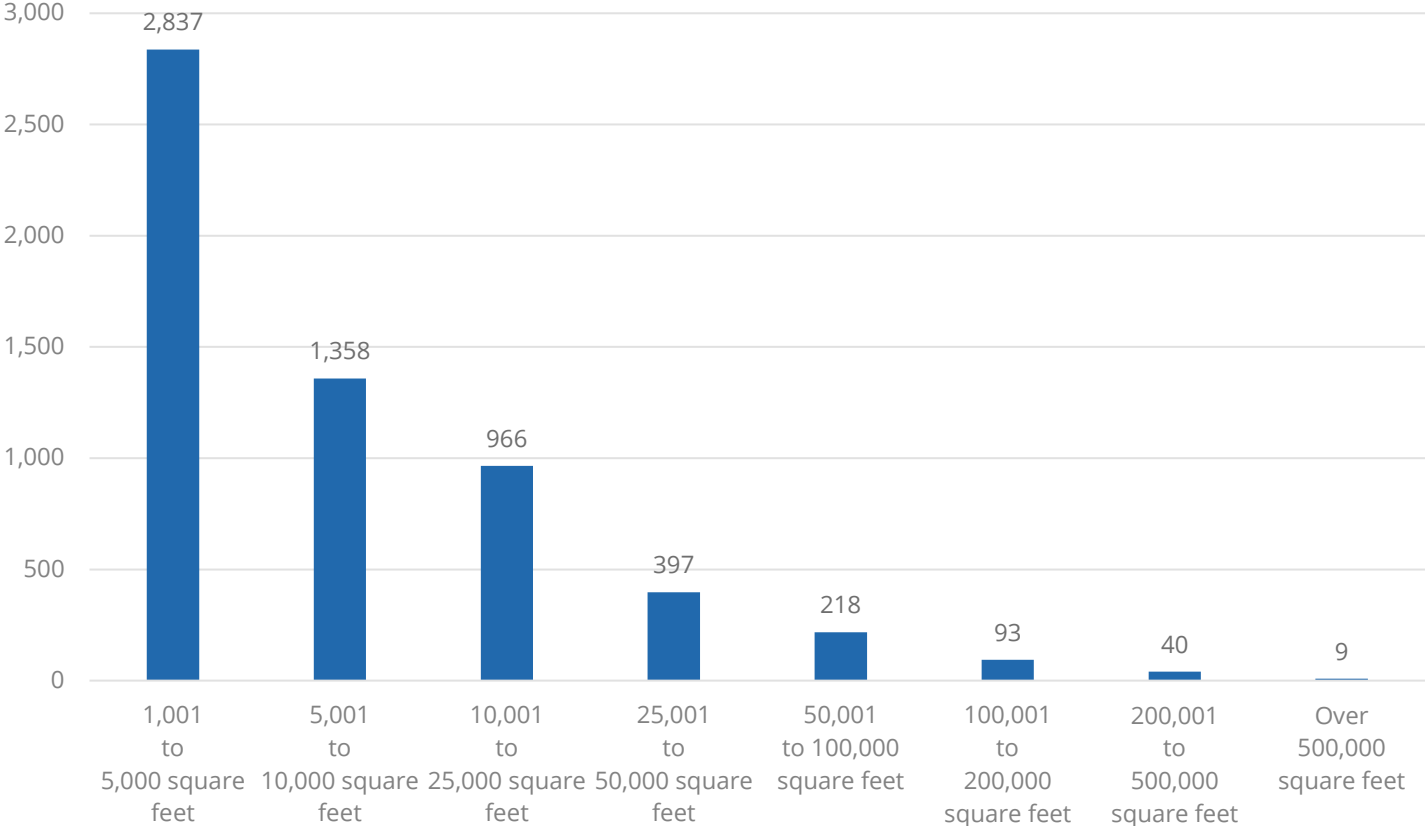


The Potential

US Commercial stock = 5.9 Million



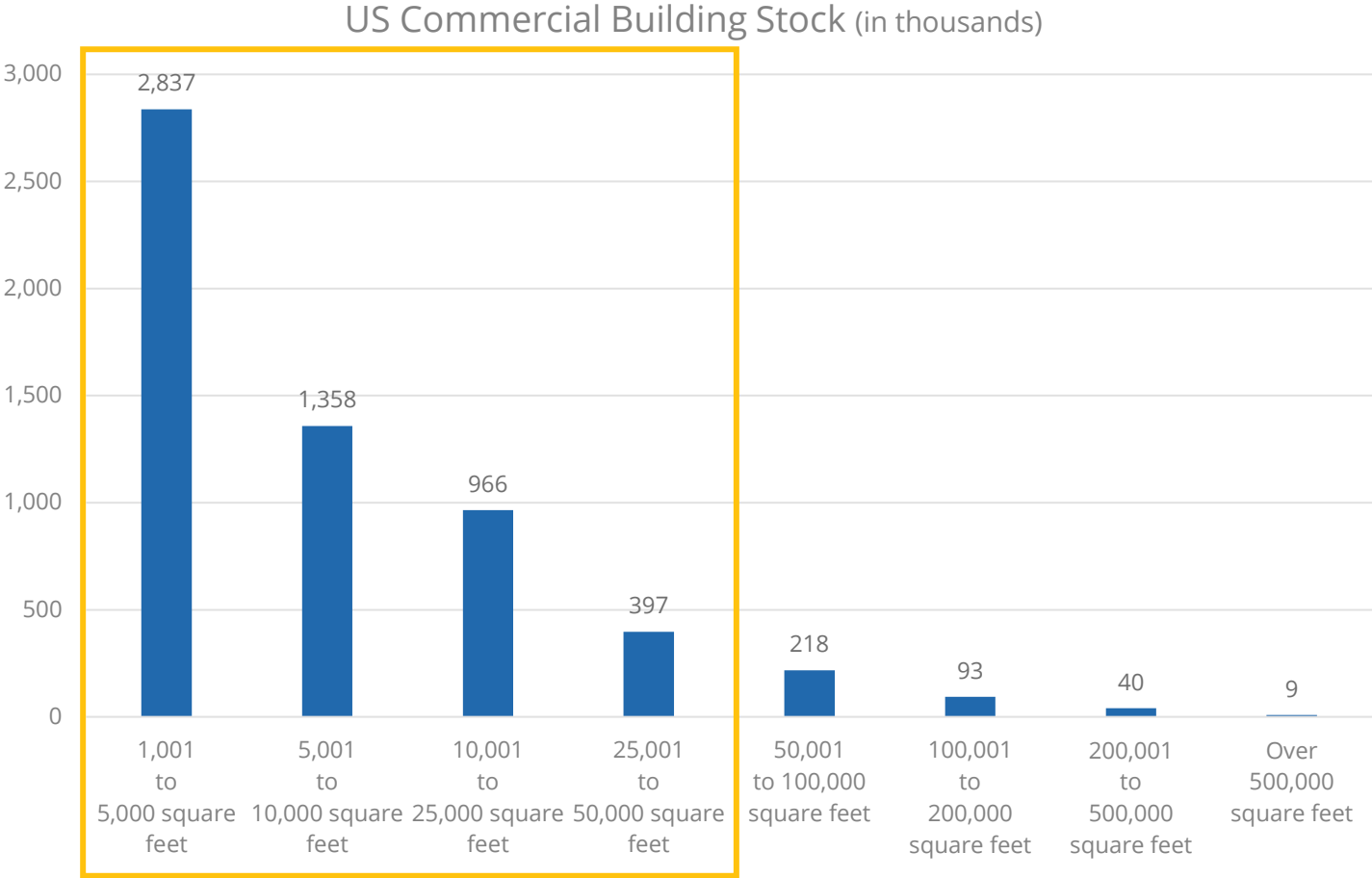
US Commercial Building Stock (in thousands)



Source: USEIA Commercial Buildings Energy Consumption Survey 2018

The Potential

US Commercial stock = 5.9 Million



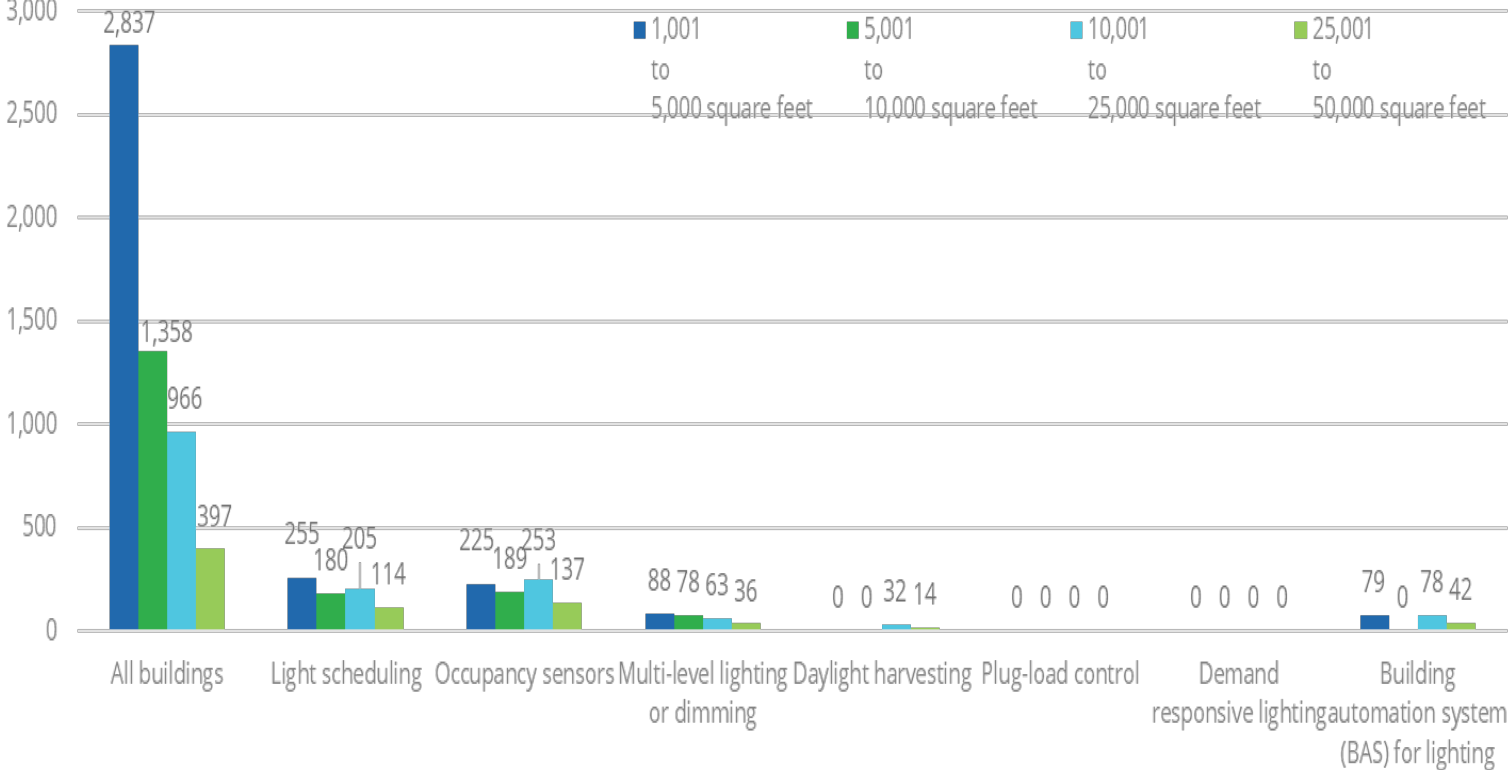
Source: USEIA Commercial Buildings Energy Consumption Survey 2018

The Potential

≤ 50,000 SF = 5.55 Million



Interior Lighting Features
1,001 to 50,000 square feet Commercial Buildings (in thousands)



Source: USEIA Commercial Buildings Energy Consumption Survey 2018

The Potential

**~3 Million
Buildings
Nationwide**

The Potential

**DLC Study:
Avg. 49%
Energy Savings
with NLCs**

The Potential

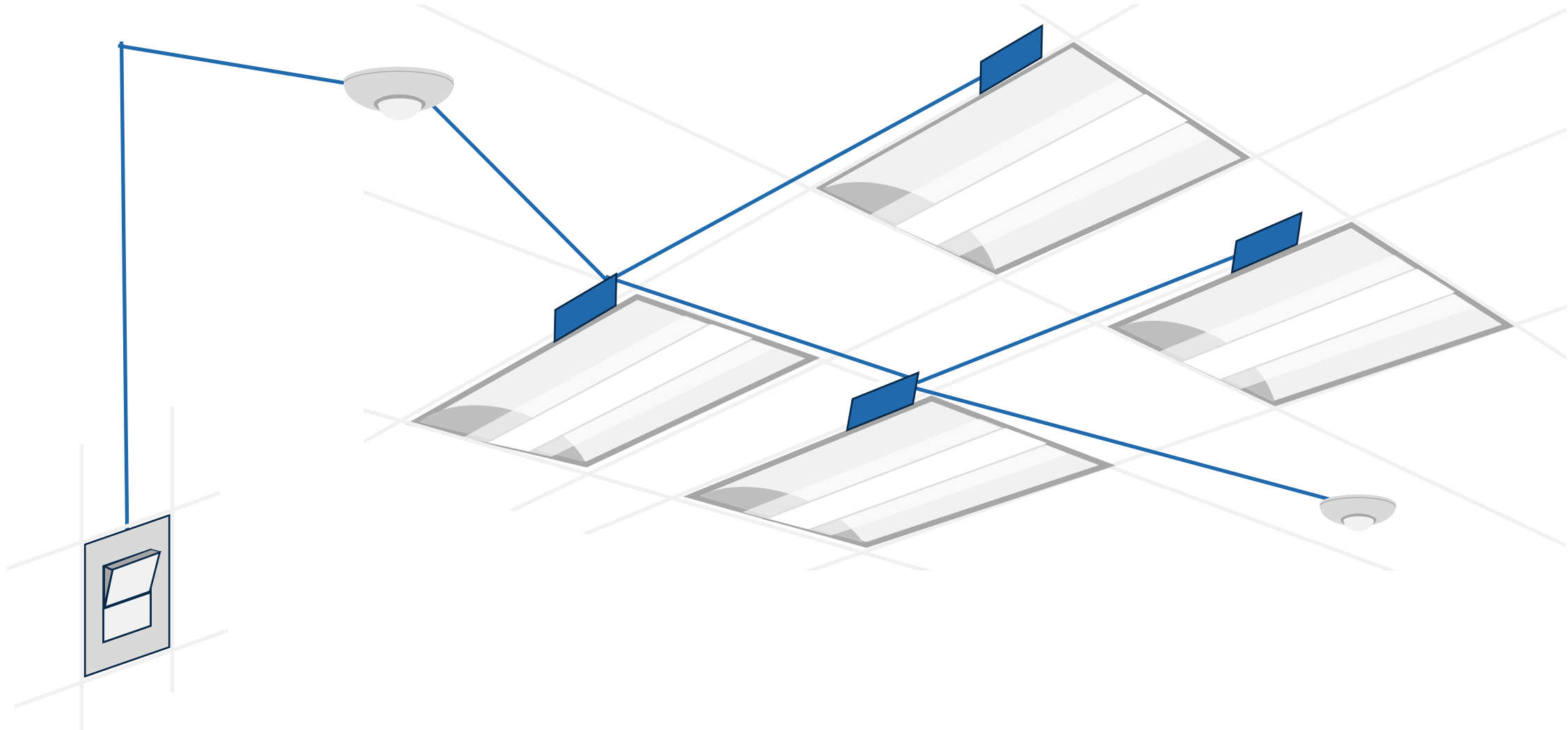
**DLC Study:
60-73% Energy
Savings with
LLLCs**

The Potential

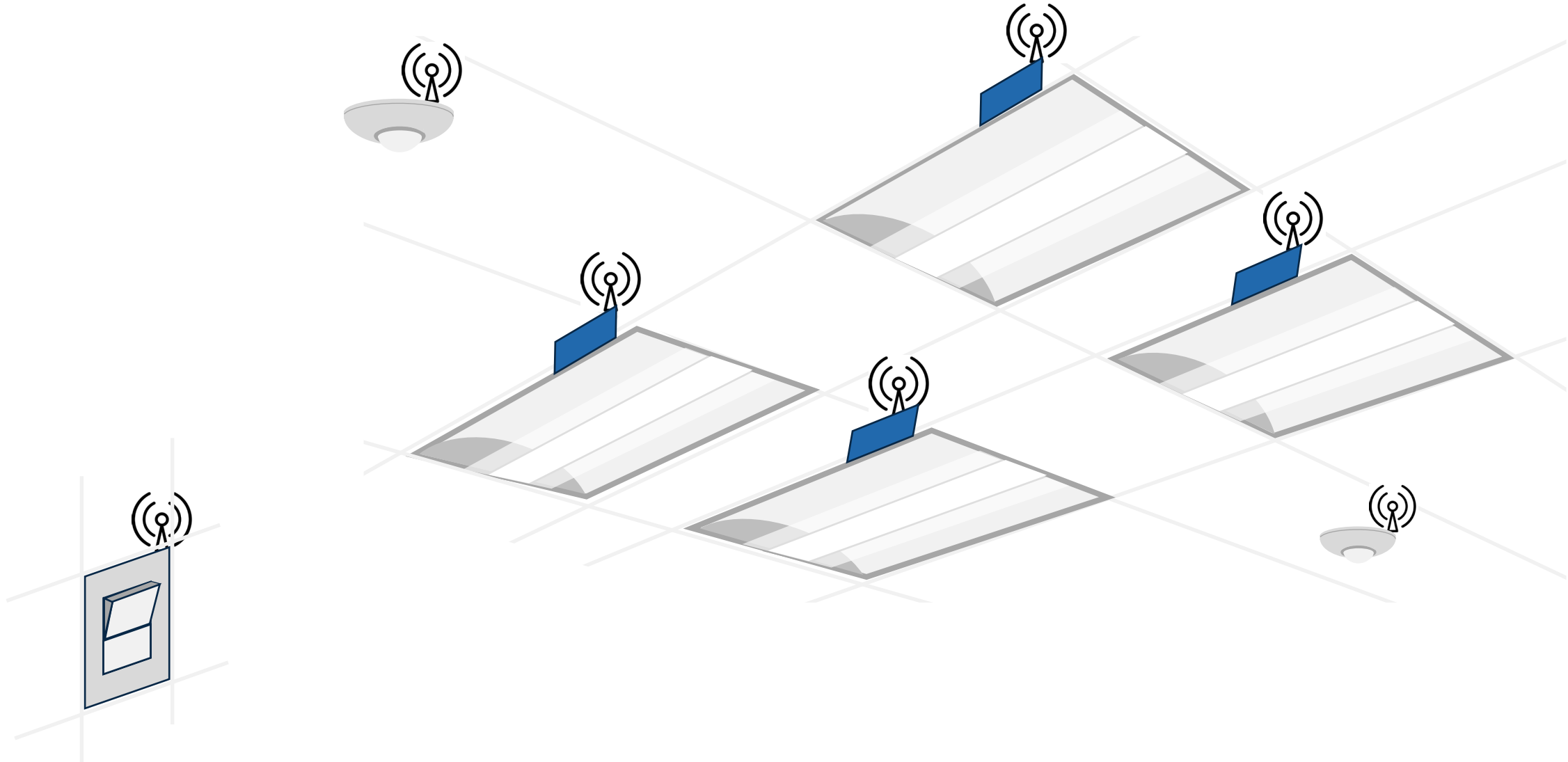
≥ 30

TWh Annually

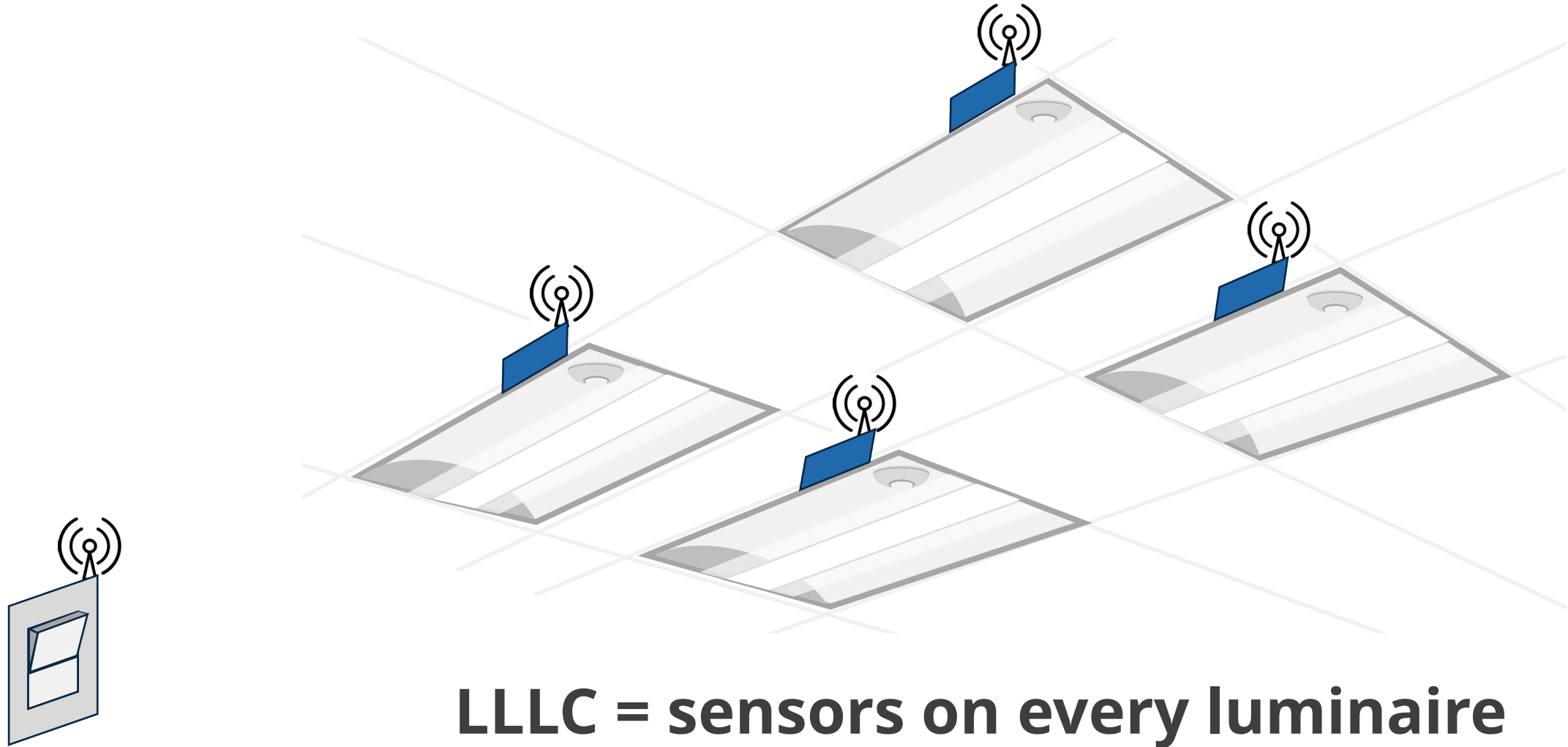
Define “Networked Lighting Control” (NLC)



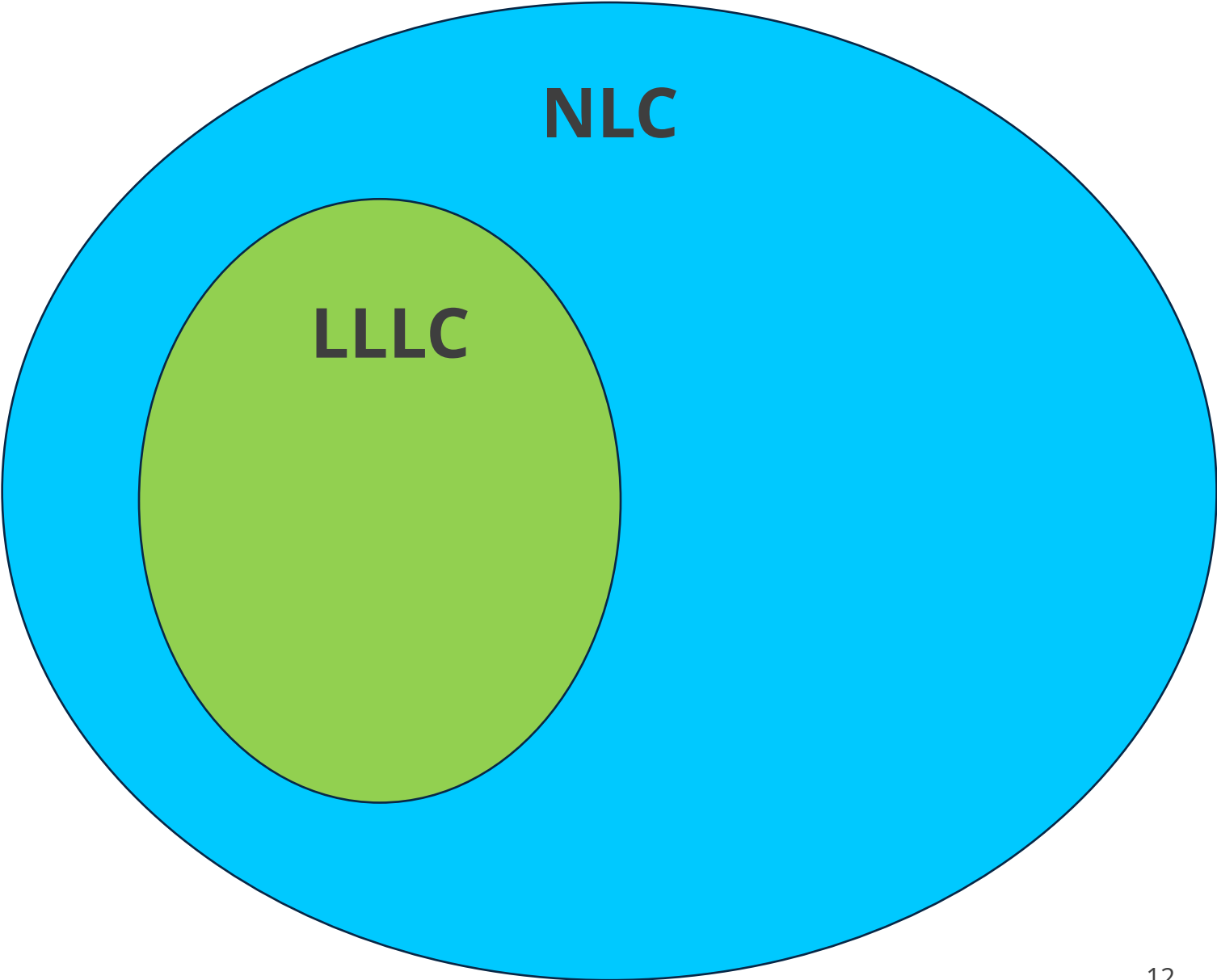
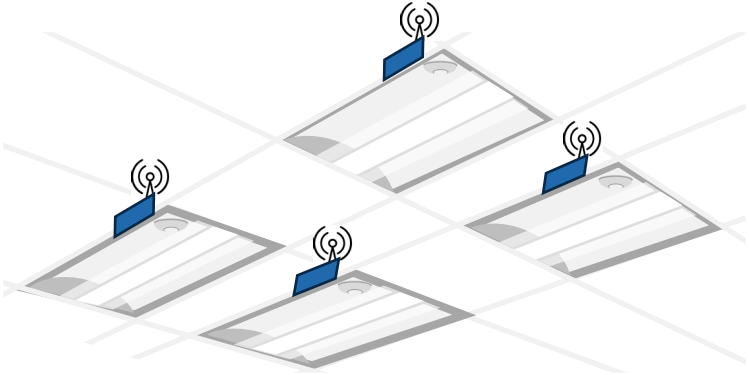
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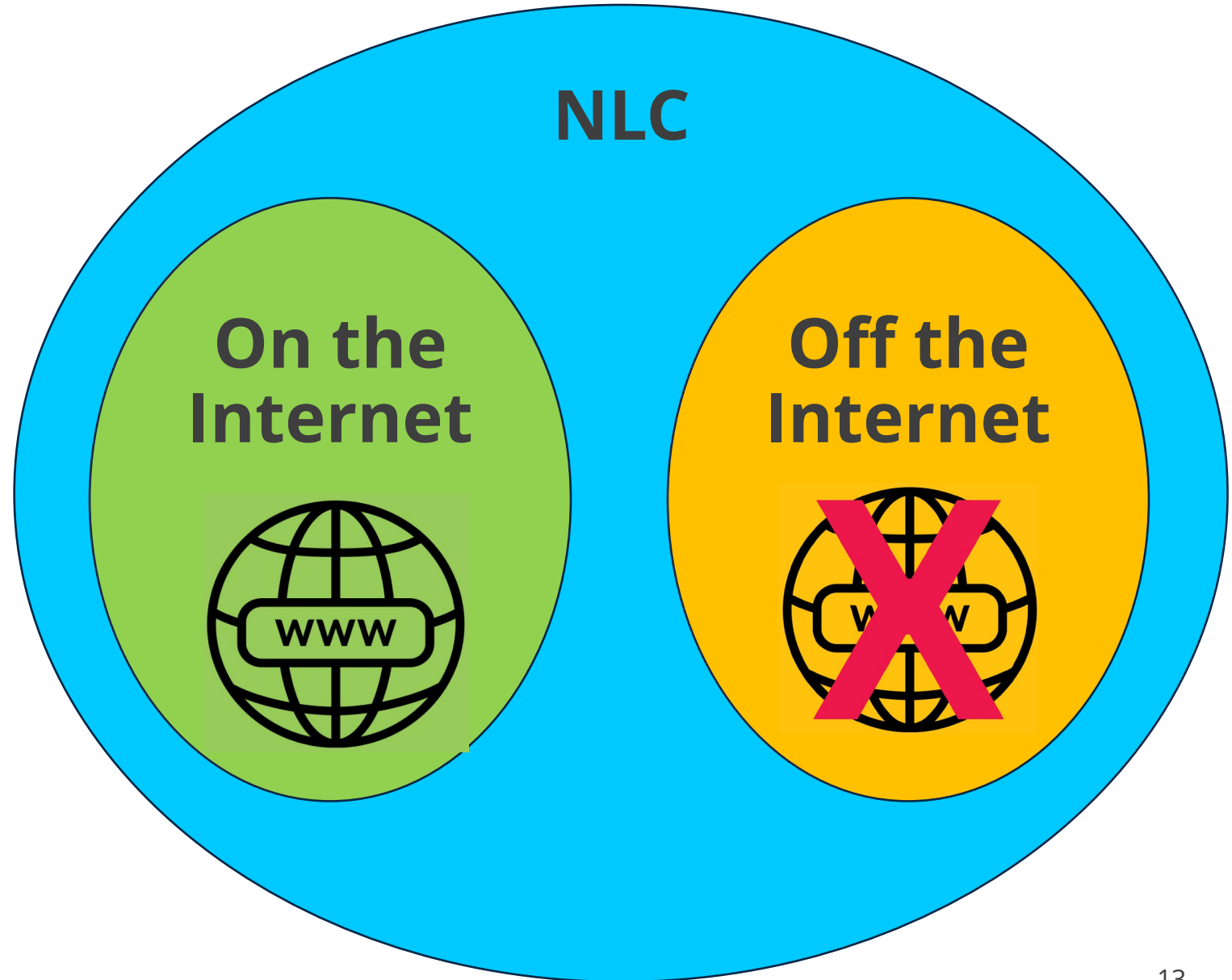
Define “Networked Lighting Control” (NLC)



LLLC is a kind of NLC



NLC can be on the Internet or not



Some NLCs access the Internet occasionally through a phone



'Room Controls' Working Group (2021)

What is needed to increase market acceptance?

'Room Controls' Working Group (2021)

What is needed to increase market acceptance?

Right Size

- Promote systems that are well suited for **retrofit** projects in **small to medium** size buildings
- **Balance** system capabilities with affordability

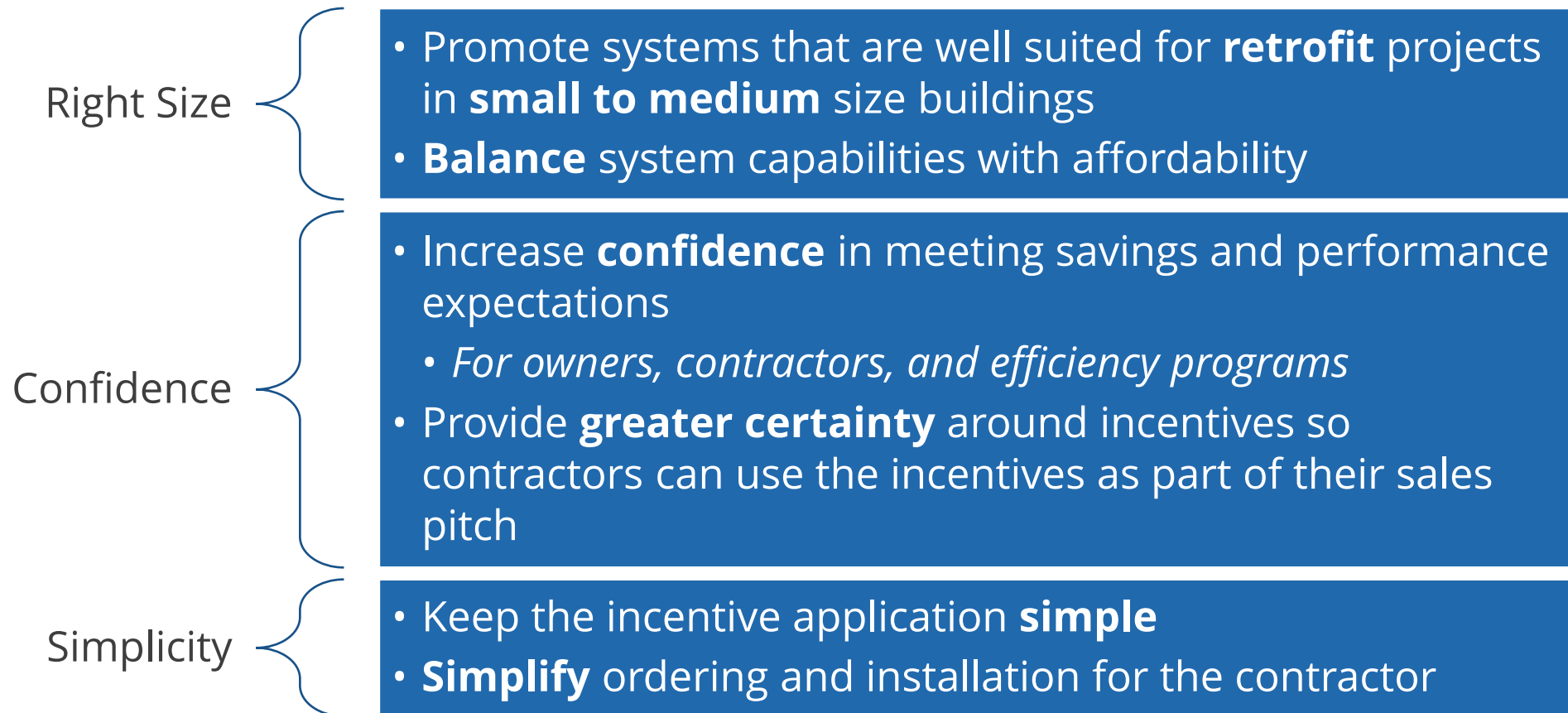
'Room Controls' Working Group (2021)

What is needed to increase market acceptance?

- Right Size
 - Promote systems that are well suited for **retrofit** projects in **small to medium** size buildings
 - **Balance** system capabilities with affordability
- Confidence
 - Increase **confidence** in meeting savings and performance expectations
 - *For owners, contractors, and efficiency programs*
 - Provide **greater certainty** around incentives so contractors can use the incentives as part of their sales pitch

'Room Controls' Working Group (2021)

What is needed to increase market acceptance?

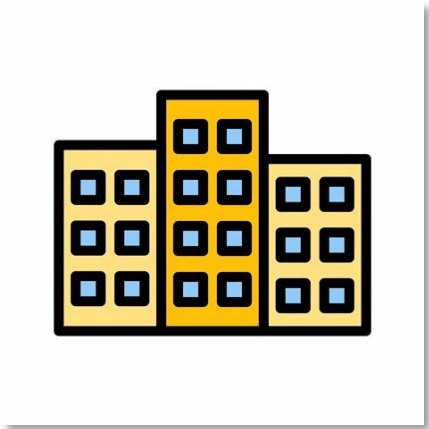


NLC-Local

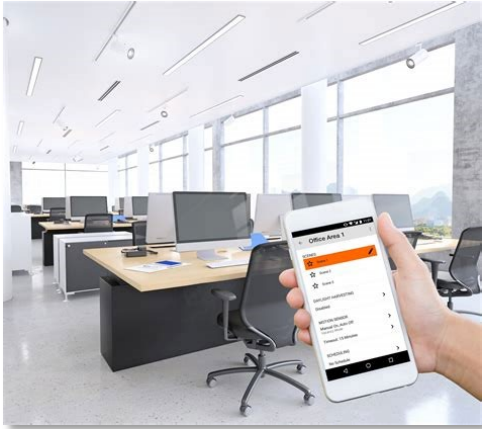
Project Profile



Retrofit



**Under 50,000
sq.ft.**



**Local Control
Only**



**No System
Integration**

NLC-Local

System Requirements



Wireless



Standalone



Embedded



**Self-Serve
Startup**

Required Capabilities

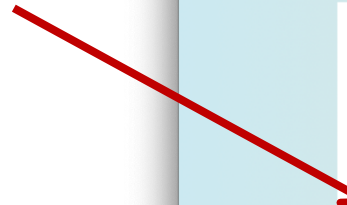


Optional Capabilities



NLC-Local

NLC-Local Filter



The screenshot shows the website interface for 'DLC Qualified Product Lists > Networked Lighting Controls'. The top navigation bar includes the DLC logo and various menu items like 'FIND PRODUCTS', 'ABOUT US', etc. The user is logged in as 'Jason Jeunnette'. The main content area is divided into a left sidebar for filters and a right main area for product listings. The filter sidebar has a 'You have 0 saved items' message and buttons for 'Save Search Criteria' and 'View Saved Searches'. Below this is a 'Listed Products' dropdown menu. The 'NLC-Local Technical Requirements Version' filter is currently set to '1.0'. The 'Manufacturer' filter lists several brands like Acuity Brands, Ad Hoc Electronics, etc. The 'Brand' filter lists brands like Acuity Controls, AirLink Blue, etc. The 'Ease of Implementation' filter lists options like 'Factory Representative On-Site', etc. The product listings on the right include 'EarthConnect', 'Athena', 'Aleo Blue', 'SkyFi Blu Pro', and 'Silvair', each with details on manufacturer, brand, interior scope, and technical requirements version.

NLC-Local

Product ID: N6U1MOK4L5V

DLC LISTED NLC-Local Logo

Aleo Blue
Manufacturer: Aleo Lighting, Inc.
Scope: Interior
Scale: Portfolio/Enterprise, Whole Building, Room or Zone, Structured Parking
Technical Requirements Version: 1.0
Products Listed: 204
PUDs Covered: Wall Wash Luminaires, High Bay Luminaires, Recessed Fixed Downlights, Battery Powered Wall Mounted Manual Control Device, 2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces

PRODUCT OVERVIEW

Manufacturer	Aleo Lighting, Inc.
Product Website	View Website
QPL	Networked Lighting Controls
Listing Status	Listed
Date Qualified	2023-05-30
Product Case Studies	View Website
Technical Support Phone	(877) 358-8825
Standard Warranty Length	5 Years
Extended Warranty Needed?	No

SUMMARY

✓ Networking	✓ Occupancy Sensing
✗ Traffic Sensing	✓ Daylight Harvesting
✓ High-End Trim	✓ Zoning
✓ Individual Luminaire Addressability	✓ Continuous Dimming
✓ Control Persistence	✓ Scheduling
✓ Energy Monitoring	✓ Remote Diagnostics
✓ User Interface	✓ Luminaire Level Lighting Control (LLLC)
✓ Personal Control	✗ Load Shedding/Demand Response
✗ Plug Load Control	✓ External Systems Integration
✓ Emergency Lighting	✓ Cybersecurity
✓ Color Changing/Tuning	✓ Scene Control

NETWORK [VIEW DETAILS](#)

INTEROPERABILITY [VIEW DETAILS](#)

ENERGY SAVING STRATEGIES [VIEW DETAILS](#)

Products Listed

PUDs Covered

NLC-Local

NLC-Local Project Tool

Project Tool

https://designlights.org/dashboard/nlc-local-project-tool/

FIND PRODUCTS ▾ ABOUT US ▾ OUR WORK ▾ RESOURCES ▾ NEWS & EVENTS ▾ JOIN US ▾ Q Jason Jeunette DLC

APPLICATION PORTAL ↗

NLC-Local Project Tool

← VIEW PROJECT DASHBOARD

Project Dashboard

+ START NEW PROJECT

Project Name	Install Date	EE Program	Submitted	Status
UI Demo	Aug 26, 2024	United Illuminating	Jul 26, 2024	Complete
Test Project	Aug 15, 2024	Focus On Energy	Jul 10, 2024	Complete
FoE Demo	Jul 26, 2024	Focus On Energy	Jul 03, 2024	Complete
UI Demo	Jun 18, 2024	United Illuminating	Jun 12, 2024	On Hold
UI Demo 2	Jun 12, 2024	United Illuminating	Jun 12, 2024	On Hold
Demo - Studio Preschool	Oct 07, 2024	Focus On Energy	Jun 11, 2024	Complete

← Page 1 of 1 →



APPLICATION PORTAL

New Project

VIEW PROJECT DASHBOARD

- Dashboard
- QPL Search
- Connect with DLC
- News & Updates
- Events & Webinars
- Application Pre-submission Tools
- Resources & Tools
- QPL Data Access & API
- Profile Settings

First, let's talk about your project.



PROJECT NAME

PROJECTED INSTALL DATE

09-17-2024

What **incentive program** are you applying for?

Select option

It this a **Retrofit** project?



Yes



No

What **size** is your building?



More than 50,000 sq ft



Less than 50,000 sq ft

Does this project require **remote (offsite) control**?

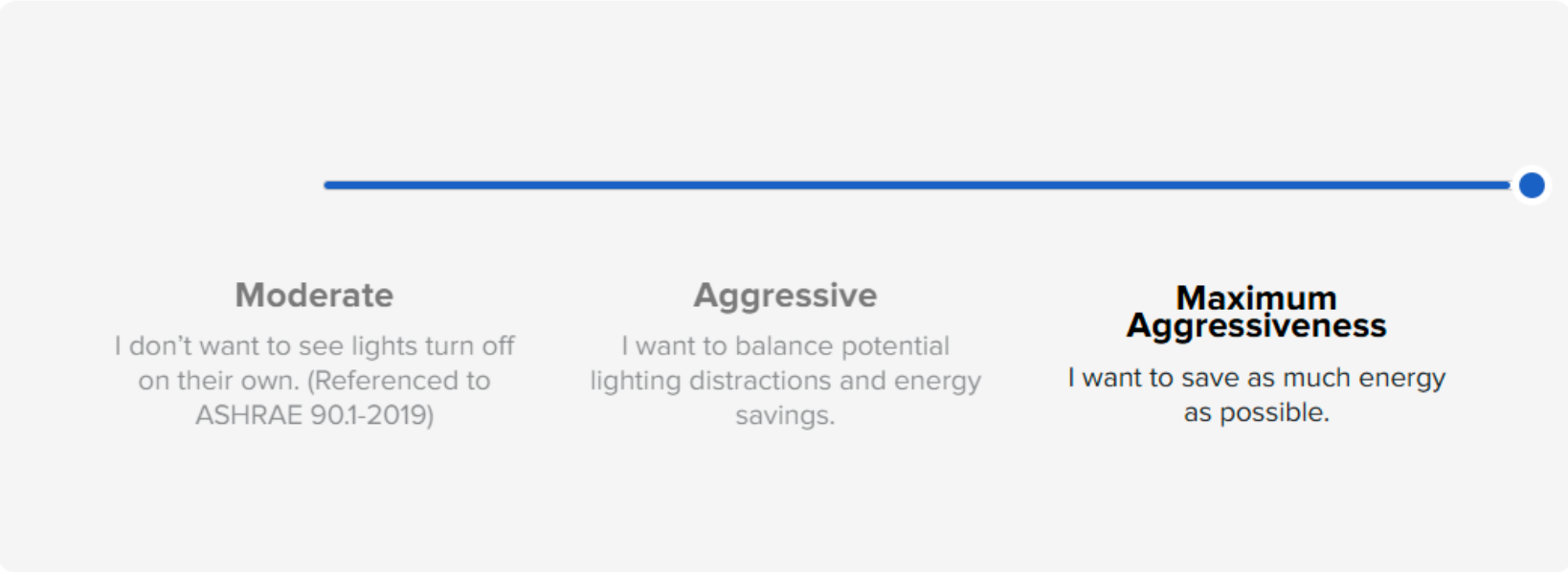


Project Tool



Project Tool

What level of energy savings would you like to apply?



Moderate
I don't want to see lights turn off on their own. (Referenced to ASHRAE 90.1-2019)

Aggressive
I want to balance potential lighting distractions and energy savings.

Maximum Aggressiveness
I want to save as much energy as possible.

Download the Excel template, add with your information, then upload your file.



Upload Project Data Files



Download Excel Template

Please arrange your Excel file to match the headers in this provided document.

DOWNLOAD .EXCEL



Drag & Drop Excel file here

or

SELECT A FILE

ADDITIONAL NOTES :

Type your message here...

CONTINUE →

Project Tool



Automated Sequence Of Operations Generation


#1 Admin/Classrooms Area

Room #	Room Name / Type	# of Fixtures	# of Sensors (embedded/standalone)	# of Manual Control Pts	Sensing/Timeout	High-End Trim	Daylight Harvesting	Scheduling	Manual Demand Response
600a	Sondheim Classroom	12	12/0	2	Vac / 20 min	80%	✓	✓	✓
601	Office Open Office	8	8/0	2	Vac / 20 min	80%	✓	✓	✓
602	Office Enclosed Office	4	4/0	1	Vac / 20 min	80%	✓	✓	✓

Project Tool

Automated Product Verification

Bill of Materials

 **PRODUCTS VERIFIED** PAGE 1 OF 1

PROJECT
Studio Preschool Elmhurst
600 N Michigan St
Elmhurst, IL 60126

CONTACT
Andrea Shapiro
Studio Preschool Elmhurst,
Principal
ashapiro@studiopreschool.com
888.123.4567

**PROJECTED
INSTALL DATE**
12/17/2022

All products to be from the same manufacturer and DLC listed under the same NLC-Local System ID.

Qty	Tag	Manufacturer	Product Code	SSL GPL Product ID	NLC-Local Product ID	NLC-Local System ID	
24	L-1Ps	RAB Lighting	EZPAN2X4-50YN/D10/LCBS	QJNSIWD	HKUWND	RABLCB	✓
48	L-2	RAB Lighting	RBAY17M+PIR40/LCB	HKEUNWL	JKSUIWN	RABLCB	✓
9	MC	RAB Lighting	LCBLUEREMOTE/W	N/A	LJUISLE	RABLCB	✓

Installers

PROJECT DETAILS BY ROOM

Sondheim

ROOM NUMBER

600a

ROOM TYPE

Classroom

BUILDING AREA

Admin/Classrooms

Lighting Fixtures

#	Tag	Type (PUD)	Description	High-End Trim	Dim / Non-Dim	Daylight Enabled (circle one)	Device ID (6 digits)	Installed? (check)	Programmed? (check)
1	L-1Ps	EZPAN2X4-50YN/D10/LCBS	2x4 Flat Panel with Controller and Sensor	80%	Dim	Yes / No	_____	<input type="checkbox"/>	<input type="checkbox"/>
2	L-1Ps	EZPAN2X4-50YN/D10/LCBS	2x4 Flat Panel with Controller with Sensor	80%	Dim	Yes / No	_____	<input type="checkbox"/>	<input type="checkbox"/>
3	L-1Ps	EZPAN2X4-50YN/D10/LCBS	2x4 Flat Panel with Controller with Sensor	80%	Dim	Yes / No	_____	<input type="checkbox"/>	<input type="checkbox"/>
4	L-1Ps	EZPAN2X4-50YN/D10/LCBS	2x4 Flat Panel with Controller with Sensor	80%	Dim	Yes / No	_____	<input type="checkbox"/>	<input type="checkbox"/>
5	L-1Ps	EZPAN2X4-50YN/D10/LCBS	2x4 Flat Panel with Controller with Sensor	80%	Dim	Yes / No	_____	<input type="checkbox"/>	<input type="checkbox"/>

Project details by room simplifies installation

Installers

Pick List
simplifies material delivery

Lighting Inventory

Unique ID - Loc Ref# - Room Name	Tag	Qty	Manufacturer	Product Code	Fixture Mounting	Description
1 - Classroom 31	L-01b	4	Acuity	2BLT4R 30L ADP EZ1 LP840 NLTAIR2 RES7	Existing Luminaire	2x4 Retrofit for Fluorescent Troffers with Curved Linear Prismatic Lens, 3000 lumens, 4000K, 120-277v, nLight Air Gen 2 control with integral PIR sensor.
1 - Classroom 31	LW-01	1	Acuity	RPODU 2S DX WH G2 J5	Wall Surface	Battery Powered Wireless Wall Switch with On/off + Raise/Lower Control, White, 5-Pack
1 - Classroom 31	LW-1GP	1	Acuity	1G Decora Plate	Wall Surface	-
2 - Classroom 30	L-01b	4	Acuity	2BLT4R 30L ADP EZ1 LP840 NLTAIR2 RES7	Existing Luminaire	2x4 Retrofit for Fluorescent Troffers with Curved Linear Prismatic Lens, 3000 lumens, 4000K, 120-277v, nLight Air Gen 2 control with integral PIR sensor.
2 - Classroom 30	LW-01	1	Acuity	RPODU 2S DX WH G2 J5	Wall Surface	Battery Powered Wireless Wall Switch with On/off + Raise/Lower Control, White, 5-Pack
2 - Classroom 30	LW-1GP	1	Acuity	1G Decora Plate	Wall Surface	-
3 - Classroom 29	L-01b	4	Acuity	2BLT4R 30L ADP EZ1 LP840 NLTAIR2 RES7	Existing Luminaire	2x4 Retrofit for Fluorescent Troffers with Curved Linear Prismatic Lens, 3000 lumens, 4000K, 120-277v, nLight Air Gen 2 control with integral PIR sensor.
3 - Classroom 29	LW-01	1	Acuity	RPODU 2S DX WH G2 J5	Wall Surface	Battery Powered Wireless Wall Switch with On/off + Raise/Lower Control, White, 5-Pack
3 - Classroom 29	LW-1GP	1	Acuity	1G Decora Plate	Wall Surface	-
4 - Library 28	RM-01	44	-	Fixtures Removed - Do Not Quote	n/a	Remove 2 lamp F32 T-8 Luminaires
4 - Library 28	L-06	38	Acuity	2BLT4 30L ADP EZ1 LP840 NLTAIR2 RES7	Ceiling Recessed Grid	2x4 Center Basket Troffer with Smooth Reflector and Curved, Ribbed Diffuser, 3000 lumens, 4000K, 120-277v, nLight Air Gen 2 control with integral PIR sensor.
4 - Library 28	LW-01	4	Acuity	RPODU 2S DX WH G2 J5	Wall Surface	Battery Powered Wireless Wall Switch with On/off + Raise/Lower Control, White, 5-Pack

Building Occupants

NOTICE TO ROOM OCCUPANTS



Sondheim

ROOM NUMBER

600a

BUILDING AREA

Admin/Classrooms

Your lights have been updated!

This room now has an updated lighting control system. The new system may operate differently than you are used to. Here are some details of how the new system will operate.

VACANCY MODE

The lights in this room operate in vacancy mode, or manual-on/auto-off.

How do I **TURN ON** the lights?

When you enter the room, *push the button* to turn on the lights. The lights will come on to their last level.



Notice to room occupants manages expectations

Increase Confidence in Savings

Reduce Admin Burden

Sound Helpful?



Thank You

Jason Jeunnette

jjeunnette@designlights.org