



TAKE CONTROL: SMART INDUSTRIAL LIGHTING AND CONTROLS

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Welcome



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Angela Pilant, LC – Evergreen Energy Partners

28 years of experience in utility and lighting industries.

Program Manager supporting LLLC market transformation across the US.

Working with utilities, specifiers, distributors and contractors to drive adoption.

Passionate about sharing practical strategies that help move projects forward.

Any reference and product photos and videos in the presentation today are for educational purposes.



Industrial Lighting Priorities

Lighting and Controls can help solve operating problems.

Uptime

Avoid disruption, maintain visibility, and support work without adding complexity.

Safety and quality

Provide the right light where work happens and reduce dark or overlit areas.

Operating cost control

Reduce unnecessary runtime, maintenance trips and the effort needed to change settings.

Where LLLC Fits

LLLC combines LED luminaires with embedded sensing and individual control capability.

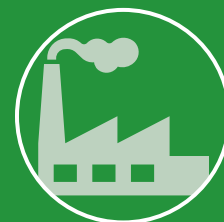
- **At each luminaire:** Occupancy and daylight response can happen where the light is needed.
- **Across the facility:** Groups, scenes, schedules and overrides support whole-area operation.
- **Over time:** Software changes allow the lighting to follow changing layouts, shifts and operations.



High-Value Industrial Applications



Warehouses: Aisles, staging, racking, loading and intermittent activity



Manufacturing floors: Production cells, inspection areas, material movement and shift changes



Support spaces: Maintenance shops, storage, break rooms, corridors and restrooms



The best opportunities match control behavior to how each area is used.



Control Strategies By Task



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Low activity or intermittent use:

Occupancy response with appropriate time delay. Examples: Storage, aisles, utility rooms.

Task-critical work: Manual control and task tuning. Examples: Inspection, assembly, maintenance.

Daylight-exposed areas: Daylight response with field verification.

Examples: Perimeter bays, skylight zones, loading.

Multiple shifts:

Schedules and authorized overrides. Examples: Production floors, shift overlap, cleaning.

Operational Flexibility

Industrial facilities change. Lighting controls should not force a wiring project every time the operation changes.

- **Layout changes:** Re-group or adjust lighting zones when equipment, storage or workflow moves.
- **Shift and schedule changes:** Update runtime behavior as staffing and operating hours evolve.
- **Future system needs:** Maintain a path to add facility-wide visibility or integration later.



Safety, Comfort and Visibility



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- Deliver appropriate light levels for inspection, material handling and walking paths.
- Support safer transitions when spaces move between occupied and unoccupied states.
- Reduce complaints by tuning sensor response and manual controls to the work area.
- Maintain clear control of areas that must remain lit for security or production.

“What does this work area need to support people and production?”

Start there, then select the control behavior.

Installation and Maintenance Considerations



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Plan the intent: Identify zones, critical areas, special tasks and who can approve field decisions.

Commission in the space: Verify sensor coverage, group response, manual controls and schedule behavior.

Leave a usable handoff: Document final settings and ensure the facility team knows how to make changes.

A successful project includes programming, verification, and turnover. Equipment installation alone is not the finish line!

Opportunity Conversation



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Use questions that uncover operating priorities before leading with technology



- Which areas operate continuously, and which sit empty for long periods?
- Where do people need better visibility or more control?
- How often do layouts, shifts, or operating hours change?
- Who handles lighting complaints and maintenance today?

Key Takeaways

Industrial lighting upgrades can support uptime, safety, maintenance and reduce your controllable operational costs.

- LLLC adds flexibility by making lighting behavior easier to adjust as the facility changes.
- The strongest opportunities begin with the task, the operating pattern and the people who use the space.
- Commissioning and a clear owner handoff help the system deliver long-term value.

Question: Where could lighting control support a current industrial challenge?





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THANK YOU

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