



Delta Controls has developed a complete range of native BACnet products—HVAC, lighting control and access.

The combined use of Delta Controls' gateways, fully programmable controllers and intuitive building operations software, makes buildings easier to manage and more energy efficient.

Think, sense, speak—with Delta Controls' O3 Sensor Hub Delta Controls' O3 Sensor Hub detects motion, sound, light and temperature with unsurpassed accuracy, providing building automation systems with complete, centralized input to make economic decisions in real time.

Delta Controls' O3 Integrated Room Control system combines HVAC, access control and lighting control in a modular system. By merging multiple protocols as well as inputs and output into one unit, the system improves room control, avoids duplicate devices and lowers energy costs.

- Communicates with occupants via RGB light ring and integrated speaker.
- Saves time with easy-to-install mounting plate.
- Detects occupancy using sound and motion.
- Measures surface temperatures precisely with IR sensors.
- Combines temperature, humidity, light and motion in a single package.

[Connect with a Delta building automation expert now.](#)

## National LED Market Observer

**1. Effective Dates for 7 States Banning Fluorescent Lamps** - Colorado recently became the seventh state to ban nearly all fluorescent lamps. The other six states are: California, Hawaii, Maine, Oregon, Rhode Island, and Vermont. The chart shows the effective dates for each state's phaseout of screw-based CFLs, as well as pin-based CFLs & linear fluorescent tubes. [Effective Dates For 7 States Banning Fluorescent Lamps | LightNOW \(lightnowblog.com\)](#)

State	Screw-base CFL phaseout date	Pin-base CFL and fluorescent tube phaseout date
California	January 1, 2024	January 1, 2025
Colorado	January 1, 2025	January 1, 2025
Hawaii	January 1, 2025	January 1, 2026
Maine	January 1, 2025	January 1, 2026
Oregon	January 1, 2024	January 1, 2025
Rhode Island	January 1, 2024	January 1, 2025
Vermont	February 17, 2023	January 1, 2024

2. **Top 10 Highest-Paying Cities for Electricians: 2022** - [Top 10 Highest-Paying Cities for Electricians: 2022 | EC&M \(ecmweb.com\)](#) annual mean wage:

1. San Jose/Sunnyvale/Santa Clara, Calif. - \$99,230
2. San Francisco/Oakland/Hayward, Calif. - \$96,330
3. Mount Vernon/Anacortes, Wash. - \$92,880
4. Seattle/Tacoma/Bellevue, Wash. - \$92,450
5. Urban Honolulu, Hawaii - \$89,740
6. Chicago/Naperville/Elgin, Ill./Ind./Wis. - \$88,990
7. Trenton, N.J. - \$88,400
8. Kahului/Wailuku/Lahaina, Hawaii - \$86,560
9. Kennewick/Richland, Wash. - \$86,000
10. New York/Newark/Jersey City, N.Y./N.J./Pa. - \$85,750

3. **DOE's Incandescent Lighting Ban Goes Into Effect** - A [new rule adopted by the Department of Energy \(DOE\)](#) last year took full effect as of Aug. 1, 2023. The rule indirectly prohibits the sale and manufacture of incandescent lamps in the United States, with some [exceptions](#). Specifically, the ban affects general service lamps that provide less than 45 lumens per watt (lm/W) and, at 15 lm/W, incandescent bulbs don't make the cut. Looking ahead, further limitations that would restrict fluorescent lighting are expected to be introduced, with a proposed rule aiming for even higher minimum efficiency levels of 120 lm/W. This would additionally support the widespread adoption of LED lighting. [DOE's Incandescent Lighting Ban Goes Into Effect - Electrical Contractor Magazine \(ecmag.com\)](#)



4. **CASE STUDIES: FSG EV Charging Station Installations** - Facility Solutions Group (FSG) — Multi-Site Automotive Dealer EV Charging Station Installation: FSG worked with a large automotive group to install electric vehicle charging stations at their network of 25+ dealerships in California, Arizona, and Texas. FSG's capabilities as a full-service electrical contractor and distributor allowed the project to stay on track at multiple sites across three states. Multi-Site Automotive Dealer EV Charging Station Installation: FSG performed electrical audits of each dealership and put together a package of chargers based on the demand and electrical service available at each dealership. Then FSG procured and provided the equipment and performed the installation of the chargers at each of the various locations. The project allowed the customer to update its facilities in response to demands from auto manufacturers, keeping the customer up and running in the race to provide more EVs for the driving public. [2023 Top 50 Electrical Contractors' Project Spotlight — Part 2 | EC&M \(ecmweb.com\)](#) Other FSG EV charging case studies at:



- [Las Vegas Commercial Property - EV Charging - FSG Electric & Lighting](#)
- [City of San Antonio EV Charging Stations - FSG Electric & Lighting](#)
- [TESLA EV Charging Stations - FSG Electric & Lighting](#)
- [IKEA EV Charging Stations - FSG Electric & Lighting](#)

5. **BriteSwitch: How Is the Shift to Tesla's NACS Connector Affecting EV Charger Rebates?** - Until a few months ago, the way people plugged in their electric vehicles (EVs) seemed pretty much settled. Tesla cars used the Tesla charging standard, and most other EVs used the CCS1 adapter. Then, suddenly, there was a shift in the marketplace as several major automakers announced their adoption of Tesla's charging standard. First, Ford announced that they'd be moving towards Tesla's standard, followed by General Motors, and more recently, Honda has also announced its transition to the Tesla connector. **How will this change affect the valuable rebates offered to help build out the charging infrastructure across North America? See how EV chargers are affected at:** [How Is the Shift to Tesla's NACS Connector Affecting EV Charger Rebates? \(briteswitch.com\)](#)

6. **How Facilities Can Boost Operating Income by Adding EV Charging by PowerFlex USA** - A quick introduction to the benefits of adding EV charging to your facilities. Download this eBook:

- The changing EV landscape and rise in demand for EV charging
- Ways property owners look to improve their return on investment
- How adding EV charging can be a critical differentiator for your property
- The importance of NOI (Net Operating Income) and a workbook to help you understand the impact of installing EV charging on your property



[Powerflex | How Facilities Can Boost Operating Income by Adding EV Charging Deck \(facilitiesnet.com\)](https://facilitiesnet.com)

7. **LED Linear Ambient Market Share Projected At 83-94%** - In 4 Northeast States Utility programs in four Northeast states have evaluated LED linear ambient market share. The utility consulting firm, DNV, performed all four rebate program evaluation reports for [Massachusetts Rhode Island Connecticut New Jersey](#). Projected LED linear ambient market share for 2023 ranges from 83% to 94%. States with less utility rebates will likely have lower market share for LED linear ambient lighting. [LED Linear Ambient Market Share Projected At 83-94% In 4 Northeast States | LightNOW \(lightnowblog.com\)](#)

8. **Energy Stocks Are Back in the Market's Driver's Seat** - Energy stocks are back on top this quarter. Energy is the best performer among the S&P 500's 11 sectors, gaining 12%—with Halliburton up 25%, Marathon 33% and ConocoPhillips 18%—while the overall index has added just 0.2%. Extended production cuts by two of the world's largest crude exporters and hopes that the U.S. economy could skirt a recession have powered oil prices to \$90 a barrel, their highest level of the year, and energy stocks have gone along for the ride. [Energy Stocks Are Back in the Market's Driver's Seat - WSJ](#)

9. **Making Networked Lighting Work for Smaller Commercial Buildings by Jason Jeunette** - As first-generation LEDs begin to be replaced, owners and operators of commercial and industrial facilities have a rare opportunity to future-proof the energy efficiency of their buildings by making sure the long-lived LED lighting systems installed today include networked lighting controls (NLCs). Research shows that ongoing energy savings from lighting can grow an average of 49% (nearly 70% in some building types) when LED installations include NLCs. Pair NLCs with HVAC systems and there's potential to save 10% of an entire building's energy use. Despite these benefits, connected lighting comprises less than one percent of all luminaires in the U.S. [Making Networked Lighting Work for Smaller Commercial Buildings | EC&M \(ecmweb.com\)](#)

10. **Smart Lighting Opportunities for Electrical Contractors by Brendon Van Campen** - Driven by the growth of LED lighting, changing energy codes, and the operational advantages of connected control, smart lighting is big business. By 2030, the global smart-lighting market is [projected to reach \\$94 billion](#), creating the perfect opportunity for contractors to differentiate their services and increase revenue, while bringing value to customers. Whether your focus is on commercial buildings, private homes, or the combination of both in the high-growth multi-family or multi-use markets, customers are looking for solutions that deliver connectivity and convenience, safety and security, and energy and space management. **Five top tips to help you take advantage of this opportunity at:** [Smart Lighting Opportunities for Electrical Contractors | EC&M \(ecmweb.com\)](#)

11. **College Football Kicks Off Under New LED Lighting** - At least 8 college football teams highlighted the new season by pointing out that they are playing under new LED lighting at some of the country's most historic football stadiums. Universities at Florida State, Florida, Central Florida, Texas Tech, Michigan, North Carolina, Maryland, and Boise State University all introduced new LED lighting upgrades for the 2023 season. The lighting system will greatly enhance the in-game fan experience, and also allow athletes the ability to track ball flight better using pinpoint lighting, all while lowering total operating costs. [College Football Kicks Off Under New LED Lighting - lightED \(lightedmag.com\)](#)

12. **WHITE PAPER: Designing Disinfection Systems with UVC LEDs** - As more companies turn to UVC LEDs, we're seeing the innovative ways designers can take full advantage of the footprint, power, and lifetime benefits of these devices. Design engineers need to consider a few key parameters when considering LEDs for UV disinfection applications. Download [Designing Disinfection Systems with UVC LEDs](#) for an overview of how to calculate required LED power based on wavelength and disinfection criteria along with calculations for thermal management requirements based on LED characteristics. [Designing Disinfection Systems with UVC LEDs | LEDs Magazine](#)

13. **RESEARCH: Lighting Retrofits Reimagined from the EC&M e-books Library** - It's a common problem — as technology advances, old buildings get left behind. According to a Grainger study, more than 70% of buildings in the United States were built before the year 2000. Needless to say, the lighting industry has certainly come a long way since then. We've seen advancements in brightness, energy efficiency, lighting control, and more. A lot of existing buildings could see improvements in lighting quality and cost efficiency by adopting new technology. However, the issue many building owners face is how they can install this new technology without a complete overhaul of the systems in place. Fortunately, retrofitting is an easy solution to bring old buildings up to date. The selections in this e-book will bring you up to date on the current state of retrofitting in the lighting industry. [Lighting Retrofits Reimagined | EC&M \(ecmweb.com\)](#)



14. **CASE STUDY: MRS Industrial Updates Lighting with EarthTronics LEDs** - MRS Industrial, the Columbus, Ohio-based facility includes two buildings that are connected in the middle. Through its lighting management and maintenance program, regular lamp replacement of its T8, six-lamp, high-bay fixtures had become a popular choice to maximize lighting system effectiveness and control costs. However, the current lamps were no longer producing the appropriate lumens levels needed for productivity. To improve the illumination, reached out to Bill Liberto, Regional Sales Manager for EarthTronics, Inc. EarthTronics, Inc. manufactures a wide range of energy saving long life LED lighting products for commercial and industrial applications. The team established three major criteria to replace the T8 fixtures. First, the new lighting system had to provide better efficiency in delivering lumens. Second, the team wanted to increase footcandles on the floor. Finally, the fixtures had to be more cost efficient. The result of the new lighting system was dramatic on the shop floor. Light levels went from 12 footcandles to over 52 footcandles—more than quadrupling the light levels around key areas in the buildings. Check out the recommendations at: [MRS Industrial Updates Lighting with EarthTronics LEDs - Facility Management Lighting Quick Read \(facilitiesnet.com\)](#)

15. **Resilient Revenue: EC&M's 2023 Top 50 Electrical Contractors Special Report** - In the face of supply chain snarls and inflated prices, EC&M's 2023 Top 50 Electrical Contractors see combined revenue rise. Even when times are hard, good times can often roll on. A collection of the nation's largest electrical contractors showed that's possible by registering a solid percentage revenue increase in 2023, even in the face of significant supply chain and inflation pressures that brought higher materials and labor prices, shortages, and delivery delays. [Resilient Revenue: EC&M's 2023 Top 50 Electrical Contractors Special Report | EC&M \(ecmweb.com\)](#)

16. **Amazon to Invest up to \$4bn in AI Start-up Anthropic** - Among the tech giants positioning themselves for an edge in the race to develop more AI capabilities, online behemoth Amazon has agreed to invest up to \$4 billion in artificial-intelligence startup Anthropic. As part of the deal, Anthropic would use Amazon's custom chips to build and deploy its AI software. Amazon said AWS will become Anthropic's "primary cloud provider for mission critical workloads," including safety research and future foundation model development. Anthropic also plans to run the majority of its workloads on AWS, Amazon added. [Amazon to invest up to \\$4bn in AI start-up Anthropic | Financial Times \(ft.com\)](#)

17. **California Energy Code Lighting Language Cleanup Initiative** - California's Energy Code, also known as Title 24, is updated every three years. This law ensures the use of efficient, cost-effective building technologies by requiring that the state establish and maintain "building design & construction standards that increase efficiency in the use of energy for new residential and nonresidential buildings to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy... These standards are called the Energy Code and are managed by the California Energy Commission. Now the state is enforcing its 15th edition (known as the 2022 Energy Code) to clarify the nonresidential and residential lighting and lighting controls language contained in the 2022 Energy Code. Learn more about the initiative and recommendations in the June 2023 LD+A Research article and the final report. [Energy Code Lighting Language Cleanup Initiative | Recommendations | California Lighting Technology Center \(ucdavis.edu\)](#)

18. **DOE Publishes First Round of Caliper Test Results for GUV Products** - GUV disinfection technology is among the most effective and energy-efficient methods to reduce airborne disease transmission. The Department of Energy (DOE) has published the first round of CALiPER test results for germicidal ultraviolet (GUV) products. The results highlight both substantial energy efficiency opportunities and efforts that are needed to address performance claims and testing limitations. This report follows the model of the Commercially Available LED Product Evaluation and Reporting (CALiPER) program, launched in 2006. Download the summary report to read about the Round 1 test results and recommendations, or the [full report](#) for more detailed discussion of the tested products, methods, and results.

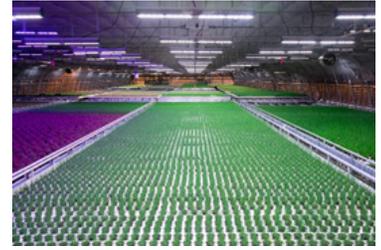
19. **The New IALD Website Is Live** - The IALD has launched a comprehensive update to the IALD website and data systems, enhancing the functionality and responsiveness of our digital platform, while providing an improved user experience and faster access to valuable professional resources. Your participation in the new Home (iald.org) begins with visiting the site and logging in as a registered user. This welcome applies to IALD members and non-members alike, as well as LIRC member company representatives and other interested lighting design industry professionals. <https://www.youtube.com/watch?v=fTVldejqRuQ>

20. **Amerlux's President Chuck Campagna Appointed Head of Building Solutions Americas Business Unit at Delta Electronics** - Amerlux, an award-winning design-and-manufacture lighting company, announced today that President and CEO Chuck Campagna has been appointed as the Head of the Building Solutions Americas Business Unit (BSABU) at parent company Delta Electronics, a global leader in power and thermal management solutions. Campagna, who holds a master's degree from Columbia Graduate School's Executive Education Program, has won numerous honors and achieved record growth at Amerlux since becoming the company's top executive in 1999. He will maintain his current position at Amerlux while leading Delta's BSABU. "With his vision, strong interpersonal skills and dedication, we are confident that BSABU will serve as a strategic driver for expanding our business throughout the Americas," said Bill Y.C. Lo, general manager of Delta's Building Automation Business Group. "This includes both solutions and products. Additionally, this move aims to bolster the competences, capabilities and capacities of BABG through a collaborative endeavor involving Delta Controls, March Networks, LOYTEC Americas and Vivotek." To see new lighting solutions from Amerlux, visit <https://www.amerlux.com/> as well as its new corporate [video](#).

## Global LED Energy Market Observer:

### 21. **Fluence Leads New Trends in More Controllable Fixtures, Customized Portfolio**

**Solutions Help Commercial Growers Succeed** - Fluence offers time-varying spectrum control, which could reduce OpEx (operating expenses) and makes use of narrow spectral bands outside of the PAR range to produce the required morphological changes in plants. Fluence will continue to advance its monitoring and control solutions and invest in R&D to strengthen its capability to modify and customize a grower's spectrum over time. Fluence, a leading supplier of LED horticultural lighting and business unit within Signify's Digital Solutions division, has been committed to developing innovative LED horticultural lighting technology and providing customers with more customized lighting solutions. LEDinside had an opportunity to interview Jordon Musser, chief product officer of Fluence: [Fluence Leads New Trends in More Controllable Fixtures, Customized Portfolio Solutions Help Commercial Growers Succeed - LEDinside](#)



**22. Fluence LED Lighting Solutions Increase Yields for California Cannabis Cultivator Oakfruitland** - Fluence announced the success of its partnership with Oakfruitland, a California-based cannabis cultivator. Fluence lighting has outperformed competitor LEDs used by Oakfruitland, leading to a 5% increase in Oakfruitland's yield, a 5% reduction in energy usage (despite higher overall light levels) and a 50% improvement in installation efficiency, especially on Pipp Horticulture racks. Oakfruitland is a family-owned cannabis company that grows premium cannabis at scale. Since its founding, the company has made significant investments in its cultivation strategy and quality control processes, including regularly trialing and evaluating new technology partners to ensure each growing component is fully optimized. For more information on Fluence, visit [www.fluence.science](http://www.fluence.science)

**23. Signify Shines Light on Its Klite Group in China** - The company is now describing the arrangement as a joint venture and implies that the new factory in Jiujiang is an outsourced rather than in-house arrangement. The four-year-old hook-up with Klite is a "joint venture," Signify stated in a press release trumpeting a new 2.15 million square foot facility that will fully operate 192 production lines by the end of the year. [Signify shines light on its Klite group in China | LEDs Magazine](#)

**24. Signify and Dutch University Recommit to Horticultural Research** - Horticultural lighting sales remain stuck in neutral, but research keeps rolling along. In the latest example, Signify said that it has renewed its collaboration with Holland's Wageningen University & Research, and that the two groups are investigating more energy-efficient deployments of LEDs. The two outfits are examining different practices that reduce the energy consumption of LED lighting. One tomato study showed that lights can be dimmed at times — rather than kept on at full intensity — with little detriment to growth. WUR collaborates with other LED lighting companies in addition to Signify. It recently worked at the chip level with [ams Osram](#) to examine the effects of red spectra. It has also worked with GE Current to examine [the effects of interlighting on tomatoes](#). [Signify and Dutch university recommit to horticultural research | LEDs Magazine](#)

**25. RESEARCH: Global Horticulture Lighting Market 2023-2028** - The global horticulture lighting market is on track to achieve remarkable growth, projected to reach USD 10.4 billion by 2028 from USD 3.7 billion in 2023, at a formidable CAGR of 22.4% during the period from 2023 to 2028. The driving force behind this growth is the transformative technology of customizable light spectra, which has revolutionized plant cultivation. Horticulture lighting technology allows growers to tailor the light environment for each crop, leading to optimized growth, faster maturation, and improved crop quality. <https://www.researchandmarkets.com/reports/>  
[Global Horticulture Lighting Market 2023-2028 – lightED \(lightedmag.com\)](#)

26. **ams OSRAM Receives Funding for Semiconductor Technology** - ams OSRAM received notice of substantial public funding by the German federal government and the Free State of Bavaria. The funding is intended to boost the further development of semiconductor technology. The envisaged IPCEI funding (Important Project of Common European Interest) will support ams OSRAM in making its own investments in the research and development of innovative optoelectronic components at its Regensburg location. The amount will be mainly invested in activities for the research and development of innovative optoelectronic semiconductors and their manufacturing processes, thus creating 400 new high-tech jobs. In addition, ams OSRAM will invest in new clean room and laboratory facilities for research, development and pilot production – perfectly equipped for working on various innovative applications (e.g. UV-C LEDs for disinfection and near-infrared emitters for LiDAR for autonomous driving). Another special focus will be microLEDs for use in an all-new type of display. Automation and Artificial Intelligence (AI) generally play a major role in Regensburg. [ams OSRAM Receives Funding for Semiconductor Technology – lightED \(lightedmag.com\)](#)

27. **Glamox to Install LED Lighting on Eight PGS Seismic Vessels** - Lighting solutions specialist Glamox has won a contract from the Norwegian marine seismic survey firm PGS to provide marine LED lighting for eight of its seismic data acquisition vessels. This first phase of the retrofit project will involve replacing fluorescent tube lighting with around 2,500 marine-certified LED luminaires fitted on the exterior and interior of the eight vessels. PGS's switch to energy-efficient LED lighting is being driven by its desire to comply with emission reduction targets, new regulations, and its own sustainability targets, Glamox said. The LED luminaires will be fitted into eight vessels that operate worldwide: Ramform Vanguard, Atlas, Titan, Hyperion, Tethys, Victory, Sovereign, and PGS Apollo. The EU Restriction of Hazardous Substances directive is phasing the most common types of fluorescent tube lighting – providing yet another reason to switch to LED lighting. [Glamox to Install LED Lighting on Eight PGS Seismic Vessels - LEDinside](#)



28. **Global Lighting LED Market Value Likely to Increase 4% to USD 6.38 Billion in 2023** - According to TrendForce's latest market research report "TrendForce 2023 Global LED Lighting Market Analysis-1H23", the global LED lighting market value shrank to USD 61.4 billion in 2022 with a 5% YoY decline due to numerous factors. Entering 2023, the market demand will likely recover thanks to the continue energy-saving revamp projects across Europe, the US, and Japan, upcoming LED replacement peak, and rapidly rising demand for high-quality. [TrendForce: Global Lighting LED Market Value Likely to Increase 4% To USD 6.38 Billion in 2023 - LEDinside](#)

## Monthly Feature:

**Distribution AI: A Playbook to Accelerate Success - MDM's upcoming webcast on October 5 at 1pm ET will discuss the findings of months of rigorous research.** As Artificial Intelligence proliferates through every aspect of our economy, distribution executives are seeking opportunities to deploy these new capabilities across their businesses. Our research informs a new framework that sets a clear path for distribution executives to make critical AI decisions that deliver value in practical, tangible ways for their businesses, employees, customers, and partners.

Modern Distribution Management initiated this research project in early 2023 to give leaders of wholesale distribution companies a better understanding of the potential challenges and benefits of artificial intelligence. We also wanted to provide a practical guide to help distribution executives develop a strategic roadmap for leveraging AI. Based on the early stage of AI adoption in distribution, which we validated through a survey of more than 300 industry respondents in mid-2023, we structured this research effort to complement this baseline survey to gain insights from early adopters. We conducted dozens of interviews with distributors, technology service providers, consultants and other industry participants who have been at the forefront of integrating AI into their value propositions – either as distributors or service providers to distributors in some form. For that reason, we created a research partnership with the four sponsors – NTT DATA Business Solutions, Profit Optics, Proton.ai and Verusen. They have made this 2023 research and report into how distributors can leverage artificial intelligence possible.

We intentionally created a consortium of technology solution providers who are not only working with distributors daily on technology innovation, but who are also actively researching and identifying how to best leverage AI in their own tech stack and industry solutions portfolio. By combining the complementary perspectives of these technology innovators together with the insights of distributors at the forefront of AI exploration, we felt we could best build a bridge from the current state of AI in distribution to a practical roadmap for implementation for every distributor, to a vision for AI's impact on the future of distribution.

**Five distributor behaviors for AI success** - From our research, one key insight was that the nature of questions executives are asking about AI has shifted from “why?” to “how?”. In other words, distribution executives are increasingly convinced AI can be impactful, but they have yet to put it to use. An explosion of vendors, applications, tools, and consultancies means AI is more accessible than ever. However, using AI to create strategic value can still be daunting. We heard - and synthesized - the common behaviors distribution executives are modeling to cut through the AI hype, instigate action, and maximize benefits. Those behaviors are: **1. Setting strategic AI priorities 2. Activating AI programs 3. Scaling up from small prototypes 4. Investing in AI-equipped people 5. Cultivating your AI platforms.**

Each of these behaviors is reinforced by a series of concrete decisions executives can make to grow their AI maturity. We refer to these decisions as building blocks. You can register for the webcast on October 5 at 1pm ET at: [AI Research Playbook - Modern Distribution Management \(mdm.com\)](#)