

## ActiveCLEAN™

### *Protect Your Most Valuable Resources—Your Staff*

ActiveCLEAN™ provides maximum antimicrobial dosage levels by tuning its LED lighting to a specific, high-intensity wavelength—405 nanometers, which is outside of the UV mark.

In turn, this excites porphyrin molecules that are exclusively found in microorganisms and creates excessively toxic Reactive Oxygen Species (ROS), which causes irreparable damage throughout the microbial cell and ultimately destroys the cellular membrane from the inside out. Compared to antimicrobial wipes or UV light that may sanitize at only one given point in time, our always-on, always-there presence creates environments that are inhospitable to microbes in all types of high-traffic, well-occupied spaces. It's more critical than ever that you provide an extra layer of protection to reduce your staff's exposure to bacteria, viruses, mold and other contaminations as you welcome more workers back to the office.

ActiveCLEAN™ combines a century's worth of antimicrobial lighting research with decades of top-tier, spec-grade LED lighting design and manufacturing to better protect your business and its staff under the most beautiful, comfortable, white-light illumination. Utilizing Vyy's signature 405-nanometer antimicrobial technology, ActiveCLEAN™ provides holistic, continual antimicrobial action **against viruses, bacteria, fungi, yeast, mold** and mildew on any surface—and in any application—your light can touch, **including SARS-CoV-2, according to a recent third-party study**. With no UV light or chemicals used, our highly flexible line of commercial-grade clean lighting products **meets international standards for continual and unlimited use around people**.

- Provides continuous antimicrobial action
- Supplements manual cleaning
- Provides easy-to-use control capabilities
- Simplifies Installation and Cost-Effectiveness
- Seamlessly fits into businesses of all shapes and size

<https://bestlight.amerlux.com/active-clean/>

### **National LED Energy Market Observer:**

1. **Facility Executive: April 2021 Issue – Lighting the Way** - Lighting, always central to facilities, is being cast a new role as the industry learns more about the potential of UV lighting for healthy facilities. While used in HVAC and other areas of buildings for decades, the pandemic has spurred new interest and developments around UV-C light for healthy buildings. Our coverage of lighting extends to controls technology, with a look at a recent study on evolving costs of luminaire level lighting controls. [Facility Executive: April 2021 Issue](#)

- [UV-C Lighting For Healthy Facilities](#)
- [Trends In Lighting Controls](#)



2. **TED May Cover Story: Nothing Lasts Forever by Susan Bloom** - Ten years ago, lighting professionals and end-users alike marveled at the quickness with which LEDs were penetrating the broad range of general and specialty lighting applications and replacing renowned and long-seated conventional technologies. Touted as “the future of lighting,” LEDs slashed energy consumption and costs, brought lumen efficacy to new levels, minimized maintenance concerns, and often sported impressive life spans of seven to 10 years (based on typical commercial usage)—life spans so impressive, in fact, that the lighting industry worried about the future of the replacement market if these powerhouse products were to prevail and become the lighting solution of choice. Fast forward a decade later and LEDs have indeed become a go-to, standard solution within commercial, industrial, and institutional lighting applications. But even they don't last forever. Following, a range of professionals representing the distribution, contracting, and lighting design industries, along with a major U.S. city, discuss the emerging need to begin replacing early generations of LEDs—a day that many thought would never come. [TED Magazine - May 2021-A - page Cover \(tedmagazine-digital.com\)](https://www.tedmagazine.com/may-2021-a-page-cover)



3. **Copper and Lighting Product Shortages Hitting Electrical Contractors** - Experts anticipate that the price of copper will surge to an all-time high in the next 12 months, The U.S. Chamber of Commerce's Index, [tightening supplies of lighting products](#) are also becoming a challenge for electrical contractors. In particular, there is a [shortage of LED supplies](#), which have been disrupted over the past year due to the pandemic-related slowdowns in production and shipping. Experts see a continued shortage in the coming months because it will take time for manufacturers to ramp up production and for the supply chain to get back to full strength. [Copper and Lighting Product Shortages Hitting Electrical Contractors | Electrical Contractor Magazine \(ecmag.com\)](#)

4. **The Global Supply Chain Continues to Struggle with Demand by Jacob Wright** - Back in mid-March, we posted an article detailing the woes of the global supply chain in 2021. Unfortunately, the situation isn't getting any better and doesn't look like it will anytime soon. Recent market updates from freight forwarders go into more detail about the current situation facing US ports and the Transpacific network. See the highlights at [The Global Supply Chain Continues to Struggle with Demand - EdisonReport](#)

5. **RESEARCH: CLTC Updated Daylight Harvesting for Commercial Buildings Guide** - This publication provides guidance towards meeting and exceeding California's 2019 Energy Code for daylight harvesting. Daylight design guidelines and Energy Code requirements are provided in an easy to read, side-by-side layout, organized into sections for each building-related discipline that impacts daylight performance from building siting, through architectural and interior design, to construction, commissioning and operation. Download the PDF: [Daylight Harvesting for Commercial Buildings Guide for 2019 Building Energy Efficiency Standards](#)



6. **The Connectivity Standards Alliance Unveils Matter, Formerly Known as Project CHIP** - Matter is creating connections between more objects, simplifying development for manufacturers and increasing compatibility for consumers. The proliferation of connected objects continues to change the way we live, work and play. From homes to offices, factories to hospitals, connected objects enable us to experience our environments in cohesive, interactive ways. Yet, for too long, disconnected platforms and disparate development paths have caused confusion for consumers and complicated processes for developers and innovators. Smart objects should be reliable, secure, and work together – this is the shared vision behind Project Connected Home over IP (CHIP), now known as the new standard, Matter. Amazon, Apple, Comcast, Google, SmartThings, and the Connectivity Standards Alliance came together in 2019 to develop and promote this new standard. Now, there are more than 180 Member organizations of all sizes, across a range of business categories, and over 1,700 Member individuals participating in bringing the Matter specification, reference implementations, testing tools and certification programs to life. <https://buildwithmatter.com/>

7. **Zhaga Book 18 Ed. 3.0 Approved** - The Zhaga Steering Committee has approved the 3rd edition of the popular Book 18 specification for outdoor luminaires. The new edition allows for architectures combining an ANSI C136.41 dimming receptacle with a Zhaga receptacle next to the architectures already specified in Ed. 2.0. Additionally, Zhaga-D4i certification of hybrid luminaires as well as control devices with an ANSI interface have become available. Zhaga sees Book 18 and the liaison with the DALI Alliance as enabling smart cities by creating a platform that connects luminaires, drivers, control & communication devices and sensor input nodes. If you will; becoming the backbone of the smart city. Adding the ANSI interface gives this ecosystem further flexibility, allowing designers and specifiers options that will best suit their region of world and local compliance needs.

<https://www.zhagastandard.org/products.html>

8. **The Zigbee Alliance Rebrands as Connectivity Standards Alliance** - New brand signifies a hallmark of collaboration and creating standards of trust for the IoT industry. The Zigbee Alliance, an organization of hundreds of companies creating, maintaining, and delivering open global standards for the Internet of Things (IoT), today announced its organizational rebrand to the Connectivity Standards Alliance (CSA). The organization announced a second brand, Matter, formerly known to the industry as Project Connected Home over IP (CHIP), the future of reliable connectivity. The newly developed Matter mark will serve as a seal of approval, assuring that any object built on this standard is reliable by nature, secure by design, and compatible at scale. The Alliance will continue to develop Zigbee technology and will retain the Zigbee technology brand. <https://csa-iot.org/>

9. **WHITE PAPER: NEMA Publishes Revision to Supply Chain Best Practices** - The National Electrical Manufacturers Association (NEMA) published NEMA CPSP 1-2021 Supply Chain Best Practices. This document identifies a recommended set of supply chain best practices and guidelines that electrical equipment and medical imaging manufacturers can implement during product development to minimize the possibility that bugs, malware, viruses, or other exploits can be used to impact product operation negatively. "Key additions to the latest version of this document include new sections on market expectations, cyber insurance, and vendor dependencies....." [NEMA CPSP 1-2021](https://www.nema.org/) is available for download at no cost on the NEMA website. <https://www.nema.org/>

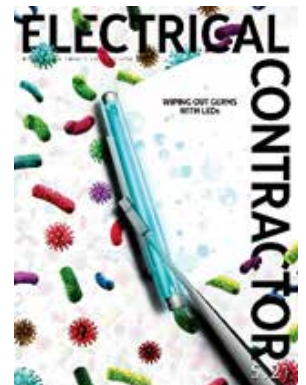
10. **WHITE PAPER: Evolving at the Pace of Change: Optimizing the Distribution Grid by GE** - The operating environment is changing dramatically and rapidly — the landscape is likely to transform more in the next 10 years than in the previous 100. At the same time, due to the continually evolving energy mix, distribution operators are experiencing an ongoing increase in grid complexity coupled with rising uncertainty due to changing business and regulatory models. The forward-thinking utility recognizes distribution optimization as a critical enabler of next-generation distribution grids, which are maximally efficient, reliable, and, ultimately, sustainable. Without digital transformation, and software delivering greater automation and control, utilities are missing opportunities to better connect, orchestrate, and optimize their distribution grids. Learn how you can deliver efficient distribution optimization to your operations. Download at: [Evolving at the Pace of Change: Optimizing the Distribution Grid | GE Digital](#)

11. **The Advantages of CEA in Strawberry Production** – Strawberries are an important crop grown in the U.S. with a market value of more than \$2.2 billion dollars, producing 1.12 million tons of strawberries in 2019. Most production of strawberries in the U.S. is done in open fields. Recently U.S. growers are confronting challenges in open field production. Controlled Environment Agriculture (CEA) structures and strategies using hydroponic systems in strawberry production could help to address the current challenges in U.S. open field production. Strawberries are definitely not an easy crop and CEA technologies can always help us to provide ideal conditions to improve production window, yield per area and fruit quality. This is the reason why now hydroponic greenhouse production of strawberries is growing rapidly across the US. Greenhouse production can be an option to increase the strawberry production window in areas where we currently grow this crop. In addition, by managing the environment inside a greenhouse it is not only possible to increase production, but also quality! [The Advantages of CEA in Strawberry Production - LEDinside](#)

12. **A New Lighting Industry Guide for Lead Generation Using Digital Automation by David Shiller** - Growing your lighting manufacturing or distribution business has gotten more difficult since the COVID-19 pandemic. Digital marketing automation can be the solution. This short guide will help you understand the latest in digital marketing automation and how it can help lighting manufacturers and distributors, to drive faster business growth, despite the pandemic. Simply put, to scale up your business, scale up your lead generation, using the latest digital marketing automation. Your business needs to reach hundreds or thousands of new prospects with multiple messages across multiple digital platforms. What's more, the messages need to be personalized to increase response rates. Sound impossible? It can be easy, with digital marketing automation. Learn more at: [https://lightingsold.com/wp-content/uploads/2021/03/rev\\_rmechaly\\_guide.pdf](https://lightingsold.com/wp-content/uploads/2021/03/rev_rmechaly_guide.pdf) Contact: David Shiller at: [david@lightingsold.com](mailto:david@lightingsold.com)

13. **Disinfecting with Light: Revisiting Sanitizing UV-LEDs by Jeff Gavin** - Today's global concern about germs and germicidal treatment makes it a fortuitous moment for disinfectant LED lighting. While it remains a nascent area as research continues, markets are broadening and companies with commercialized products are building on their successes "Sanitizing Light," in the May 2019 issue of Electrical Contractor, explored antimicrobial LED lighting in the visible light spectrum. In this approach, LEDs are tuned to wavelengths between 405–425 nanometers (nm) to deactivate and inhibit bacteria, mold, mildew and fungi. Today, you'll find more manufacturers in the antimicrobial space, including some offering ultraviolet LED (UV-LED), a disinfectant approach that also tackles viruses. [May 2021 | Electrical Contractor Magazine \(ecmag.com\)](#)

14. **Cyber-Attack Shuts Down Biggest Gasoline Pipeline in U.S.** - Colonial Pipeline is working to restore operations after a cyber-attack prompted the company to take its systems offline, threatening the supply of refined petroleum products to gas stations in major cities on the U.S. eastern seaboard. The ransomware was used in the attack. It wasn't clear if the attack was carried out by foreign government hackers or a criminal group, the officials told the Post. In ransomware attacks, hackers typically encrypt an organization's computer files and then demand a ransom payment to unlock the data. The company is the country's largest refined products pipeline operator, transporting more than 100 million gallons of gasoline, diesel, jet fuel, and home heating oil daily through a pipeline system that spans 5,500 miles from Houston, Texas to the New York area. <https://finance.yahoo.com/news/u-biggest-gasoline-pipeline-halted-112924617.html>



15. **Emerging Codes and Standards for Grid-Interactive Buildings** - As various geographic regions across the nation move towards decarbonization technologies and solutions, there is a growing recognition that "connected" or grid-interactive equipment in buildings is a critical component of decarbonization strategies. Homes and buildings are becoming increasingly flexible to interact with the grid to meet both grid and customer needs. This brief explores codes, standards, and policies to inform the potential implementation of building, equipment, and grid interconnection in the Northeast and Mid-Atlantic region. As regional stakeholders consider policy and programs to assist the proliferation of grid-interactive appliances and buildings, we examine how long-standing models of building energy codes and standards may be replicated or leveraged for purposes of driving grid-interactive homes and buildings. [Emerging Codes and Standards for Grid-Interactive Buildings | Northeast Energy Efficiency Partnerships \(neep.org\)](#)

16. **EI Announces Finalists for 2021 Edison Award** - The Edison Electric Institute (EEI) recently announced five U.S. and three international electric companies as finalists for the 2021 Edison Award. Presented annually, the Edison Award recognizes electric companies for their distinguished leadership, innovation, and contribution to the advancement of the electric power industry. The winners of the 93rd Edison Award will be selected by a panel of former electric company chief executives. See the U.S. finalists at: [EEI Announces Finalists for 2021 Edison Award | Electrical Wholesaling \(ewweb.com\)](#)

17. **CyberOptics Receives New Order Valued at \$2.4 Million for Mini LED Inspection and Metrology** - CyberOptics Corporation®, MN a leading global developer and manufacturer of high precision 3D sensing technology solutions, announced that it has received a new order valued at approximately \$2.4 million for its SQ3000™ Multi-Function systems for mini-LED inspection and metrology. The systems are expected to ship periodically through-out 2021, starting in the second quarter ending June 30.

<https://www.ledinside.com/node/31915>

18. **The Future of Buildings: Everything Is Connected by Darren Port** - Connection(s) are everything. It's true in our professional and personal relationships, and now more than ever, it's true for buildings. We have arrived at a time when we are designing and constructing zero energy buildings (houses, commercial buildings, schools) at cost, with a quicker and more significant return on investment than traditional construction. Indeed, we have a way to go before zero energy buildings are common practice – there's still the embodied carbon issue to tackle and all the existing buildings to decarbonize – but we're making progress. With the ability to achieve at-cost zero energy buildings today, what is the next evolution of buildings? It is making them grid-interactive and connected, which is in an early phase of understanding and implementation. [The Future of Buildings: Everything is Connected | Northeast Energy Efficiency Partnerships \(neep.org\)](#)

19. **DOE's Lighting Prize (L-Prize) Strives to Reshape the Future of Lighting** - This week, the U.S. Department of Energy launched a new Lighting Prize (L-Prize), designed to spur ground-breaking innovation, domestic manufacturing, and the benefits of an inclusive clean energy economy for next-generation lighting solutions in commercial buildings. The L-Prize will advance the state-of-the-art in LED lighting, encouraging innovators and researchers to engage in advanced lighting system development leading to transformative designs, products, and impact. The challenging technical requirements are intended to stimulate innovative approaches that significantly raise the bar for efficiency, quality of light, connectivity, and overall environmental footprint, while incentives for domestic manufacturing create opportunities for jobs and economic impact. Visit the website at [energy.gov/eere](http://energy.gov/eere)

20. **Explore The 2021 Better Buildings Progress Report** - Each year, DOE releases an annual report with key findings, updates, and metrics from the Better Buildings Initiative. Explore the 2021 Progress Report to learn how DOE and partners are working towards a more energy-efficient future. Over 235 companies are now partners in the Better Plants Program, part of DOE's Better Buildings Initiative. These companies represent more than 3,200 facilities across all 50 states and, as partners, have adopted ambitious energy goals. [DOE\\_BBI\\_2021\\_Progress\\_Report.pdf \(energy.gov\)](#)



21. **Vote Now for EC&M's 2021 Product of the Year** - EC&M subscribers, vote between now and midnight on June 28 to pick the product you believe should be named 2021's Product of the Year. To cast your vote, scroll through the photo gallery to read product descriptions and view a product photo. After reviewing the category winners, click the link at the top of the product description you think should be named EC&M's 2021 Product of the Year, scroll down the page to fill out the voting form, and click the bubble next to the product you want to win. It's that simple! As an incentive, three lucky voters will be randomly selected to receive a \$100 Amazon e-gift card. [Vote Now for EC&M's 2021 Product of the Year! | EC&M \(ecmweb.com\)](#)

## 22. Horticultural Lighting Market Switching On by Rick Laezman

- LEDs have helped transform lighting across the spectrum. Now, add indoor farming to the growing list of technologies that are undergoing change. Advances in LED technology, combined with a number of other trends, are putting the horticultural lighting market on a growth trajectory. The consequences of climate change have a powerful effect. Rapid population growth and urbanization, combined with shrinking water supplies, have contributed to declining stocks of arable land per person. Indoor, greenhouse and vertical farming are emerging as innovative solutions to this problem. The public and private sector are responding. A rising number of government initiatives promoting the adoption of controlled environment agriculture practices, increasing funding to develop vertical farms and greenhouses, and ongoing legalization of cannabis cultivation are helping to drive up demand. [Horticultural Lighting Market Switching On | Electrical Contractor Magazine \(ecmag.com\)](#)



23. **RESEARCH: Horticulture Lighting Market - Global Forecast to 2026** - The horticulture lighting market research report provides an in-depth overview of the industry including market segmentation by offering, technology, lighting type, cultivation, installation type, application, and geography. Analysis of the global market with special focus on high growth application in each vertical and fast-growing market segments. The objective of this study is to identify the market opportunities and estimate market size by segments and countries for last few years and to forecast the values to the next five years. [Horticulture Lighting Market, Global Forecast to 2026 | MarketDigits](#)

## Global LED Energy Market Observer:

### 24. Qatar Airways Introduces the Latest Version of Honeywell's Ultraviolet Cabin Disinfection Technology

- The latest version of the Honeywell UV Cabin System V2, that is owned and operated by Qatar Aviation Services (QAS), has been introduced to add flexibility, improve reliability, mobility and ease of use compared to its predecessor, with extended UV wings that treat both narrow and wide areas on board, reducing the overall disinfection time. This version also includes a hand wand that disinfects areas like the cockpit and other smaller spaces. Qatar Airways' aircraft also feature the most advanced air filtration systems, equipped with industrial-size HEPA filters that remove 99.97% of viral and bacterial contaminants from re-circulated air, providing the most effective protection against infection. <https://www.ledinside.com/node/31914>



25. **RESEARCH: The Worldwide Market for LEDs, Market Review and Forecast 2020** - The Worldwide Market for LEDs report analyzes and estimates LED lighting market on a global and regional level. This report is a deep dive on the data to provide new insights and trends for the LED industry. The report includes assessment of market conditions for key applications including: Display Backlighting, Automotive Lighting, Mobile Applications, Signs, Lighting, and more. [Executive Summary \(strategies-u.com\)](#)

26. **EFC Launches Industry Portal for UV GUV Devices** - The Electro-Federation Canada (EFC), voice of advocacy and advancement of safety in Canada, recently announced the launch of an industry web portal to provide channel partners with timely resources and guidance on germicidal UV (GUV) devices.

These devices are a proven and effective means to prevent the spread of infectious bacteria and viruses. Health Canada is currently reviewing GUV devices for safe use in public and shared spaces. For more information about this program and details on GUV devices in the Canadian market, visit the [EFC website](#).



27. **ams Delisting Osram, Readies Factory Shifts in €350M Cost Saving** - Continuing to digest a company that had been nearly four times its size, Austrian sensor maker ams said it is delisting Osram as a separately traded entity, and is seeking €350 million (US\$420.5M) in operational savings that will likely include major changes at manufacturing plants as the two outfits hone in on the chip business — including micro LEDs — and continue to sell off Osram’s digital lighting businesses. ams, based in Premstaetten, is also changing its name to ams Osram Group, pending shareholder approval at the ams annual general meeting on June 2. With domination complete, ams said yesterday it is delisting Osram. It is offering a price of €52.30 (\$62.83) per share for the 28% of Osram that it does not own. [Ams delisting Osram, readies factory shifts in €350M cost saving | LEDs Magazine](#)

28. **LED Lighting & Strawberry Cultivation** - 53000 tonnes of strawberries are produced each year in France, mainly in Aquitaine, Provence-Alpes-Côte d’Azur and Rhône-Alpes. The strawberry cultivation is done either by ground, covered or not, either above ground suspended, where the strawberry tree is for example planted in bags of compost or coconut fiber. The strawberry growers often choose indoor or tunnel cultivation in order to control the parameters of sunshine, bad weather or rain. Horticultural LED lamps can adapt themselves to different types of the strawberry cultivation: in horizontal greenhouse cultivation, in confined environment, even in multi-story. Besides these advantages, horticultural LED lights can also be used to increase plant defenses, exerting a bio-control by light, thus avoiding the use of certain pesticides or purchase beneficial insects. [LED lighting & strawberry cultivation - LEDinside](#)



29. **Belgian Tomato Grower: Put Premium Lights on Premium Crops, Beware the Pollination Hit** - Hortis Group, based in the Ghent area, grows a number of varieties across 14 hectares (about 1.5 million ft<sup>2</sup>) at two sites, including 12 hectares in Sint-Gillis-Waas and 2 hectares in Moerzeke. Nothing brings in the profits more than the premium Vivolia plum tomato. So owner Dirk Willaert has focused his LED initiatives on those. By Willaert’s account, the investment was worth it, as he is now planning to cover another 2.5 hectares of plum tomatoes in time for the 2021 winter growing season, again using Philips GreenPower LED toplighting and wired GrowWise controls from Signify. But wherever you put them, beware the unintended consequence that they might make life more challenging for the bees you rely on for pollination. [Belgian tomato grower: Put premium lights on premium crops, beware the pollination hit | LEDs Magazine](#)

30. **Dutch Researchers Bring Light Therapy for Mental Health into Public View** - A promising development in a public mental healthcare system shows bipolar disorder sufferers can integrate multi-modal treatment, including light therapy, while potentially helping to improve societal acceptance regarding mood disorders. Lisette Rops a psychiatrist summarized the relationship between the human biological clock or circadian rhythm and several types of mental health conditions, mood disorders, and neurological diseases. The biological clock can dictate healing, and it prioritizes overall body repairs on a schedule, as well as stimulating the production of various hormones and chemical receptors, she said. One thing the GGzE team found that has been corroborated by other studies devoted to productivity and melatonin production is that very bright light in the morning hours has been of great value in treating affective disorders, in this case bipolar disorder. [Dutch researchers bring light therapy for mental health into public view | LEDs Magazine](#)

31. **Brilli Debuts World’s First UV-Free Household LED Lighting Proven to Kill\* Viruses and Bacteria** - Brilli announced today the launch of its new Bright Clean line, the very-first home UV-free lighting fixtures tested to kill\* viruses and bacteria on surfaces. Powered by Vyv®, the market leader in UV-free Antimicrobial LEDs, the Brilli Bright Clean line-up of fixtures harnesses the power of LED lights to keep homes clean and well with just the flip of a light switch, requiring no special apps or software. <https://www.ledinside.com/node/31989>

## Monthly Feature:

### Incentives to Light Smart: Commercial Lighting Rebate

**Programs by Craig DiLouie** - The outlook in 2021 for commercial lighting rebates is strong, with three-fourths of the United States covered by a rebate program incentivizing energy-efficient lighting and controls. In review, rebates are offered by utilities and energy-efficiency organizations to avoid a new, more costly power supply. The most common type is prescriptive, which offers a nominal cash amount per installed qualifying product. Typically, the owner gets a check, though some midstream programs incorporate it into the point of sale. Custom rebates are also available, though they're more complex. Depending on the product and program, rebates can cover 10%–70% of the lighting product cost. [Incentives to Light Smart: Commercial lighting rebate programs | Electrical Contractor Magazine \(ecmag.com\)](#)

**LED products:** The most popular commercial rebates continue to be for replacement lamps and troffers/flat panel, downlight, wall-mount, parking garage, outdoor pole-arm mount and high-bay luminaires. A majority of programs require products be listed on DesignLights Consortium's (DLC) Qualified Products List. Popular lighting control rebates, according to BriteSwitch, include remote-mounted, wallbox and luminaire-mounted occupancy sensors; photocells; and daylight dimming systems. To get the most out of rebates, learn the program and its requirements, and keep tabs on changes and funding levels. Preapproval is often required before installation. All forms must be properly completed. To determine rebate availability in your area, contact local utilities and energy-efficiency organization, such as BriteSwitch <https://briteswitch.com> or visit DSIRE Insight <https://www.dsireusa.org/> which maintains a U.S. database of energy-efficiency incentives.

Average lighting and control rebates in the United States and Canada as of February 2021

Type of LED Solution	2021
4-ft LED T8	\$4
Replacement Lamps (medium base, A19, PAR, BR)	\$4
Pin-Based (CFL-ni replacement)	\$7
Downlights	\$33
Troffers / Flat Panels	\$33
Screw-In HID (mogul replacement lamp, corncob)	\$53
Wall-Mount Luminaires	\$91
Parking Garage Luminaires	\$94
Outdoor Pole-Arm Mount Luminaires	\$97
High-Bay Luminaires	\$121

Type of Lighting Control Solution	2021
Remote-Mounted Occupancy Sensors	\$26
Wallbox Occupancy Sensors	\$23
Photocells	\$19
Luminaire-Mounted Occupancy Sensors	\$23
Daylight Dimming Systems	\$27