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### Decorative area lighting reinvented

Avista is an advanced LED light engine for retrofitting traditional and post top luminaires or for new construction.



### https://www.amerlux.com/Markets/Site-Area

With the right light, you can own the night. Amerlux has transformed municipal and area lighting technologies and applications all across the country. From retrofitting quaint downtown lighting to illuminating college campuses, to creating new urban installations, we know exterior lighting.

Los Angeles slashes energy costs by 75% with Amerlux's Avista - The historic downtown of Los Angeles was illuminated with inefficient 250-watt high pressure sodium lamps. The city desperately wanted to upgrade these to LEDs but wanted to maintain the 1920s-era poles and luminaires. Amerlux's 60-watt Avista LED retrofit product was the solution, delivering more light, better light and using less electricity.

Portland chops energy consumption by 60% while preserving vintage streetlamps - The largest city in Oregon, Portland wanted to modernize its streetlighting with new energy-efficient lighting technology, but not at the expense of its vintage streetlamps. The solution was Amerlux's Avista LED light engine, which cut energy costs while preserving the city's history.

Putting campuses and communities in the best light - LED lighting can do wonders for individual locations and whole towns—from enhancing safety to reducing crime to revitalizing dingy areas. People like to be where there is good light. Attractive lighting draws people to downtown areas for the restaurants, shopping and socializing. When the light is dim and gloomy, people feel unsafe and stay away. After we retrofitted LEDs in downtown Los Angeles one resident described the results as, "beautiful," saying "The new lights are brighter, and cover a wider area, allowing people to see more clearly and make me feel safer." Our architectural post-top fixtures and retrofits integrate security on a whole new level for towns.

### **National LED Market Observer**

- 1. **AD to Merge with IMARK Electrical** AD and IMARK Electrical two well-known independent distributor buying groups are set to merge in what figures to be a landmark embination for the electrical supply industry. The deal does not include IMARK Canada, IMARK Plumbing or IMARK Group, each are separate entities from IMARK Electrical. Framed as a "merger of equals," AD and IMARK Electrical note that the two member-owned groups represent a combined 725 independently-owned electrical distributors in the U.S. The resulting entity will be a division of AD called The Independent Electrical Supply Division, U.S. (IESD), and it will become part of AD's overall community of more than 1,400 independent distributors that span nine construction and industrial supply verticals and 14 divisions across North America. AD to Merge with IMARK Electrical Modern Distribution Management (mdm.com)
- 2. **Top Distributors in 2024 Sales-per-Employee** Sales-per-employee is one of the metrics to look at to judge a company's operational efficiency and profitability. Sixty-two Top 100 companies released both sales and employee data, either for publication or confidentially for placement on the list. The average sales-per-employee for these distributors was \$971,254, up +3.2% over last year's ranking of \$941,649. The 19 Top 100 companies in this table agreed to have their sales and employee data published, or this information was available publicly. The Electrical Market's Largest Distributors | Electrical Wholesaling (ewweb.com)

Rank	Company Name	Town/City	State	Sales-per-Employee
1	Access Electric Supply	Renton	WA	3,333,333
2	International Electrical Supply Corp.	Miami	FL	2,392,000
3	Jackson Electric Supply	Jacksonville	FL	1,682,336
4	Graybar Electric Co.	St. Louis	МО	1,162,358
5	Benfield Electric Supply Co.	Mount Vernon	NY	1,293,233
6	American Electric Supply	Corona	CA	1,287,905
7	Border States	Fargo	ND	1,278,255
8	Wesco International	Pittsburgh	PA	1,276,923
9	Sonepar USA Holdings Inc	North Charleston	SC	1,209,091
10	LoneStar Electric Supply	Houston	TX	1,205,926
11	Eckart Supply	Corydon	IN	1,108,696
12	Bell Electrical Supply	Santa Clara	CA	1,077,019
13	Facility Solutions Group	Austin	TX	1,058,117
14	G&G Electric Supply Co.	New York	NY	859,904
15	Standard Electric Supply Co.	Milwaukee	WI	788,177
16	Elliott Electric Supply	Nacogdoches	TX	755,789
17	Schaedler Yesco Distribution	Harrisburg	PA	685,532
18	CBT Co.	Cincinnati	ОН	657,641
19	HESCO	Rocky Hill	CT	498,305



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3. **The Electrical Market's Largest Distributors** - Electrical Wholesaling's 2024 ranking of the 100 largest electrical distributors in North America is an accurate reflection how the largest companies in today's electrical market are managing their businesses through the current economic cycle and surge in acquisitions and taking advantage of new market opportunities. This year's Top 100 ranking highlights just how big a deal mergers and acquisitions are in the electrical market. By our count, more than 60 firms previously ranked on our list since 1980 have been acquired. Because of all these acquisitions Electrical Wholesaling's editors made the difficult decision to pare it down from 150 companies to 100 companies. I have been working on this listing since we ranked 250 companies, and am personally sorry to see the names of so many well-known family businesses leave the list but know that the vast majority of them have found good homes with their new parent companies. The Electrical Market's Largest Distributors | Electrical Wholesaling (ewweb.com)

Wesco
 Border States
 Sonepar
 City Electric Supply
 Braybar
 Elliot Electric Supply

4. Rexel 9. McNaughton-McKay Electric

5. CED 10. U. S. Electrical

4. **MDM 2024 Top Distributors Lists** - The 2024 Top Distributors Lists, now in its 15th year, is MDM's annual ranking of the top 200 North American industrial, construction and commercial product distribution companies by revenue across 20 discrete product category sectors. Rank indicates product category standing based on 2023 company revenue within that category, however, total company revenue is displayed. Be sure to download the full report for access to executive editor Mike Hockett's exclusive analysis of the factors that affected this year's rankings. MDM-2024-Top-Distributors-Report-1.pdf (pcdn.co) Contact MDM at info@mdm.com with comments or corrections.



- 5. **FDA Rejects Claims of LED Health Risks** The Soft Lights Foundation, a non-profit organization that "advocates for the protection of people and the environment from the harms of Visible Light radiation emitted by products that use Light Emitting Diodes", has lost its latest round of safety petitions that it filed with the Food and Drug Administration. The foundation filed four petitions over the past two years, which included supplements and public comments. The petitions are aimed at establishing regulations on the amount of electromagnetic radiation emitted by LEDs. In a 19-page response, the FDA detailed why each claim is being rejected. The Soft Lights Foundation issued a statement after losing the ruling, which in part said, "Without an intervention by Congress or the Courts, municipalities, businesses, manufacturers, and employers are each now forced to develop and publish their own policy for LED products to ensure the health, safety, and civil rights of the public and the protection of the environment......." FDA Rejects Claims of LED Health Risks lightED (lightedmag.com)
- 6. **LED or LCD Display: Which One Is More Energy-Saving?** When choosing a display, energy consumption is an important factor to consider. In today's energy-conscious world, understanding the power usage of different technologies can help reduce electricity bills and minimize environmental impact. Light Emitting Diodes (LEDs) are small, efficient light sources used in a variety of applications. LEDs work by passing an electric current through a semiconductor, which emits light. Liquid Crystal Displays (LCDs) use liquid crystals to modulate light. These crystals do not emit light themselves; instead, they rely on a backlight. Traditionally, this backlight was provided by Cold Cathode Fluorescent Lamps (CCFL), but modern LCDs typically use LED backlighting for improved efficiency. Understanding the differences between these technologies will help you make an informed decision. This article will compare the power consumption of LED and LCD displays to determine which is the better choice for energy savings. LED or LCD Display: Which One Is More Energy-Saving? LEDinside



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- 7. High-Stakes Case Before Supreme Court Could Have Extensive Impacts to Energy Costs The U.S. Supreme Court could decide as early as Monday whether to review a request by the oil industry to dismiss dozens of lawsuits filed by states, cities and counties that seek to hold energy firms liable for damages they say are caused by climate change. Experts argue the high court's decision could have extensive ramifications, impacting national security and the ability to conduct business in the United States. A climate <u>lawsuit</u>, which was filed by the city and county of Honolulu in 2020, is one of many such cases seeking compensation from a dozen oil companies for what the plaintiffs claim is damages suffered as result of climate change. <u>Highstakes case before Supreme Court could have extensive impacts to energy costs | Just The News</u>
- 8. What States Are Most At-Risk for Summer Power Outages? Texas Electricity Ratings' energy experts looked at the U.S. Energy Information Administration's (EIA) 2023 Electric Disturbance Events Annual Summaries data to identify states most likely to experience disruptions this summer. By focusing on outages between May and August, the analysis also considered each outage's frequency and average duration. Last summer outages, should prepare for a potential increase in disruptions this year. What States Are Most At-Risk For Summer Power Outages? (facilityexecutive.com)

Rank	State	Number of Outages	Total Hours of Outage	
1	Michigan	10	90:12	
2	Texas	9	71:33	
3	Georgia	7	91:49	
4	Maryland	6	78:06	
•	Washington	6	04:07	
	California	5	02:55	
	Missouri	5	02:00	
5	North Dakota	5	24:52	
	Oregon	5	126:29	
	Tennessee	5	184:46	

- 9. **DOE Announces National Definition of a Zero Emissions Building** The U.S. Department of Energy (DOE) has developed a National Definition of a Zero Emissions Building—a building that is highly energy efficient, does not emit greenhouse gases directly from energy use, and is powered solely by clean energy. It applies to existing buildings and new construction and covers commercial and residential buildings not owned by the U.S. federal government. According to the DOE, there are nearly 130 million existing buildings in the United States, which collectively cost over \$400 billion a year to heat, cool, light, and power, with 40 million new homes and 60 billion square feet of commercial floorspace expected to be constructed between now and 2050. National Definition of a Zero Emissions Building I Department of Energy
- 10. **DOE:** \$45M Available for Energy Efficiency Retrofits The U.S. Department of Energy on Thursday announced six awards totaling roughly \$45 million to facilitate access to capital for funding energy efficiency projects, including audits, upgrades and retrofits. Washington, D.C. and the five states chosen to collectively receive \$45 million through this program are Illinois, Indiana, Pennsylvania, Tennessee and Vermont, the DOE said in the release. \$45M available for energy efficiency retrofits: DOE | Utility Dive
- 11. **ASHRAE/IES 90.1-2022 Becomes New National Energy Reference Standard** In March 2024, the U.S. Department of Energy (DOE) determined that the 2022 version of ASHRAE/ANSI/IES 90.1 became recognized as the new national energy reference standard. What this means: Each state must certify their state building code is as energy-efficient as this version of 90.1 or justify why they cannot comply within two years of publication of the DOE ruling in the Federal Register. This article explains how energy code adoption works, the likelihood of adoption of the 2022 or an equivalent standard in various jurisdictions, and what's new in the standard, focusing on lighting control requirements. <u>ASHRAE/IES 90.1-2022 Becomes New National Energy Reference Standard (lightingcontrolsassociation.org)</u>
- 12. 9th & 10th States Adopting Fluorescent Lamp Bans Minnesota Governor Tim Walz signed into law a bill including a "clean lighting" provision phasing out fluorescent tubes in favor of LEDs that will end the sale of fluorescent lamps in Minnesota, effective in 2025 for screw- or bayonet-base compact fluorescent lamps, and in 2026 for the slightly more specialized pin-based linear or compact fluorescent lamps. The Minnesota Senate bill language can be viewed here. A similar bill passed the House and Senate in Illinois and awaits the Illinois governor's signature. The Illinois House bill language can be viewed here. 9th & 10th States Adopting Fluorescent Lamp Bans | LightNOW (lightnowblog.com)



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- 13. **LEDucation Archives Available** If you missed LEDucation 2024 or want to revisit some of the presentations, you're in luck-LEDucation offers an archive at its website. Check out the presentations on a variety of topics, including tunable lighting, Power over Ethernet (PoE), DMX, energy codes, circadian lighting, and more! Check them out: 2024 Presentations LEDucation
- 14. **Conference Board: Energy Demand May Double in 10 Years** According to a Conference Board report, demand for energy in the US could double over the next decade, prompted mostly by the proliferation of data centers and the Al boom. The report warns this will likely put further pressure on grids and could slow the clean energy transition, but tempers this by also noting: "More positively, the broad adoption of Al tools might unlock greater efficiencies in the way electricity is used, as well as generated, stored and transported." Smart Power: Will Al Spike Electricity Demand or Reduce It Through Efficiencies? (conference-board.org)
- 15. **New DLC Study Provides a Method to Compare Outdoor Lighting** <u>Study results</u> from the DesignLights Consortium (DLC) strengthen the case for utilities and other energy efficiency programs to incentivize exterior lighting products that satisfy the DLC's <u>LUNA Technical Requirements</u>. The DLC will host a July 10 webinar to discuss the study findings. LUNA-qualified products are designed to reduce both light pollution and energy usage. With proper design and controls programming, they have the potential to save more energy than outdoor LED installations focused on energy efficiency alone, the study found. To learn more, read the study and attend the webinar at 1 PM EDT on July 10, 2024. New DLC Study Provides a Method to Compare Outdoor Lighting lightED (lightedmag.com)
- 16. Industry Developing New DarkSky Fixture Specifications The American Lighting Association (ALA) is working with NEMA and the DarkSky International Technical Committee to develop new outdoor and landscape luminaire specifications for certified dark sky luminaires, that go beyond the traditional shielding requirements. Being considered are lumen limits, chromaticity ranges, controls and light distributions. According to DarkSky, light pollution is growing by 9.6% per year, so they are also working at certifying lighting installations, as well as fixtures that minimize upward-directed light, glare, and over-lighting. Source: ALA Engineering Committee. More information on DarkSky International is available here. Industry Developing New DarkSky Fixture Specifications | LightNOW (lightnowblog.com)
- 17. **Maximize the Function and Value of Networked Lighting Controls by Jason Jeunnette** Networked Lighting Controls (NLCs) are effective energy-savers for commercial buildings, with potential to increase the efficiency of LED lighting projects by an average of almost 50 percent and much more if they're linked with HVAC systems. This potential remains largely untapped, however, since NLCs still only comprise an estimated five to ten percent of installed commercial lighting in the U.S. A noteworthy factor preventing broader adoption is unfamiliarity with the technology and how to use its features to the best advantage. The DesignLights Consortium (DLC) views NLCs as the key to not only unlocking significantly more energy savings from LED lighting projects but future-proofing them as well. In addition to its Qualified Products List (QPL) for LEDs (the largest verified list of high-performing commercial lighting products in the world), the DLC maintains a QPL of 72 independently vetted NLC systems from over 40 manufacturers. Maximize the Function and Value of Networked Lighting Controls | EC&M (ecmweb.com)
- 18. Los Angeles Cannabis Farm Will Go All In on LEDs After nearly a decade of operations and some trepidation over switching to LED lighting, Los Angeles indoor cannabis farm Clade9 last year decided to try them in one of its five rooms. The resulting 70% yield increase in a 10-week cycle now has the grower planning for more. Austin, Texas-based Fluence, a division of Signify, swapped out 72 HPS fixtures with the same number of its RAPTR LED fittings in one of Clade9's five grow rooms, covering 1,800 square feet of a 7,600 square-foot total at the South Central L.A. facility. By the end of the 10-week flowering cycles, it had produced a yield of 281 pounds, compared to an average of 165 pounds under the previous HPS lights. Those results appear to have convinced the grower to make a 100% conversion. Los Angeles cannabis farm will go all in on LEDs | LEDs Magazine



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- 19. **Ams Osram Adds a Family of Horticultural LEDs** Ams Osram has again added to its stable of horticultural LEDs, this time with a new product family that will co-exist with not replace the existing family, the company told LEDs Magazine. The new Osconiq P 3737 has a slightly higher wall plug efficiency rating than the Oslon Square RM6, at 83.2% for a 660nm hyper-red model, compared to 78.8% for a hyper-red version of the Oslon Square series introduced last year. As ams Osram explained last June with the advent of the Oslon Square line, small increases in chip efficiency can lead to larger percentage increases in lighting system efficiency. Ams Osram adds a family of horticultural LEDs | LEDs Magazine
- 20. **REPORT: The Untold Potential and Rationale of Industrial Electrification in the United States** Schneider Electric released a new report that projects that electrification of U.S. industry will grow from 30 percent to 45 percent by 2030, a 50 percent increase. The report, compiled by the company's Sustainability Research Institute, also recognizes the potential for a corresponding 25 percent reduction in fossil fuel demand over the same period. The report provides a detailed analysis by sector, projecting that 16 of 21 sectors will reach 60% electrification by 2030. Further, it projects that the U.S. industry as a whole will reach 64% electrification by 2040 with a corresponding 50 percent reduction in fossil fuel use. files (schneider-electric.com)
- 21. **Lighting the Way to Cost Savings by Regina Molaro** Independent non-profit organization, DesignLights Consortium (DLC) helps its members (utility and energy efficiency programs) reduce energy, carbon, and light pollution. It arms them with data and smart resources on lighting, controls, and integrated building systems. In its effort to offer sustainability and cost savings, the DLC provides Qualified Products Lists (QPLs) as well as research and reports on energy efficient lighting and control technologies and energy savings potential. Its technical requirements set performance thresholds for products to ensure that they provide lighting and energy savings while meeting environmental goals. The DLC's Solid State Lighting (LED) QPL is among the world's largest and most influential verified lists of high-performing, energy efficient commercial products. **Lighting The Way To Cost Savings (facility executive.com)**
- 22. **Is AI the Future of BIM?** Building information modeling (BIM) may be another way firms can maximize the efficiency of their staff. EC&M's 2024 Top 40 Electrical Design Firms Survey also indicates that this revolution is underway. All assistants eventually could be the primary way that people access BIM tools. Combining artificial intelligence with building information modeling could make designers, engineers, and other pros more productive. Here's how and what it will take to achieve that and other business benefits. Is AI the Future of BIM? | EC&M (ecmweb.com)

#### Global LED Market Observer

23. **REPORT: Global LED Tube Light Market 2024-2032** - The "Global LED Tube Light Market Report by Tube Type, Application, and Region 2024-2032" report has been added to ResearchAndMarkets.com's offering. The global LED tube light market size reached US\$ 4.2 Billion in 2023. Looking forward, the market is projected to reach US\$ 9.5 Billion by 2032, exhibiting a growth rate (CAGR) of 9.49% during 2023-2032. With the inflating prices of electricity around the world, consumers are shifting from compact fluorescent lights (CFLs) to LED tube lights. This is further supported by awareness campaigns and policies for energy conservation and environmental protection by governments in various countries. On the other hand, manufacturers are coming up with different LED lighting products and investing in marketing through newspapers and televisions, which is increasing product awareness among consumers. For more information about this report visit <a href="https://www.researchandmarkets.com/r/bmbgje">https://www.researchandmarkets.com/r/bmbgje</a>

#### 24. Navigating Al Integration in Manufacturing: Challenges, Benefits and Strategies by Karim Pourak

Manufacturing is at an inflection point. Increasing demand for more sustainable practices while maintaining productivity, quality and profitability pushes manufacturers to be more creative in solving their top challenges. Emerging technologies like AI are becoming a preferred choice. In fact, according to a recent report by MarketsandMarkets, the global AI in manufacturing market is projected to increase at a compound annual growth rate (CAGR) of 45.6% until 2028, reaching \$20.8 billion. However, adopting AI is not without its challenges. Navigating AI Integration In Manufacturing: Challenges, Benefits And Strategies (forbes.com)



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- 25. **Signify Lands a Climate Control Partner for Vertical Farm Lighting** The alliance marks the second in the last two weeks between an LED provider and a controlled environment system specialist. For the second time in the past week, an LED lighting company has teamed with a climate control enterprise to offer combined services in the horticultural sector, on this occasion taking specific aim at indoor vertical farms which use all artificial lighting. Signify said it has joined forces with fellow Dutch outfit Hoogendoorn Growth Management, a company that provides automated systems for monitoring and controlling conditions in greenhouses and vertical farms. The partnerships reflect a renewal of activity in horticultural lighting, which has been picking up again following a stagnant period that began around mid-2022. Signify lands a climate control partner for vertical farm lighting LEDs Magazine
- 26. **New Feature Smart Dimming Ensures the Right Light Spectrum at the Right Time** RED Horticulture will unveil its latest innovation in smart greenhouse lighting during GreenTech 2024, Smart Dimming. This feature optimizes artificial light usage by dynamically adjusting the spectrum based on real-time sunlight intensity, ensuring energy efficiency without compromising crop growth. "Smart Dimming provides what's best for the crop. The right light at the right time", said Regnier Ten Haaf, Commercial Subsidiary Director of RED horticulture. "Our photobiology knowledge is the key difference by making the perfect trade-off between the needs of the crops and the cost optimizations." Smart Dimming operates through a sophisticated blend of hardware and software. The algorithm calculates real-time spectrum setpoints based on sunlight intensity, using both forecasted and live data from weather services, energy services, and sensors. New feature Smart Dimming ensures the right light spectrum at the right time LEDinside
- 27. Fingal Completes Ireland's Largest LED Switch Across Its Public Lighting Network The successful completion of Ireland's most extensive public lighting replacement project to date has taken place, as Fingal County Council installed its last two energy-saving LEDs across its network of roads, residential areas and public spaces. The final milestone was reached by the council along the picturesque Coast Road in Malahide and means there have now been 35,315 environmentally friendly LEDs installed to replace their energy-guzzling counterparts throughout the county. This large endeavour, which cost around €8 million, marks a significant step forward in Fingal's mission to reduce its carbon footprint and promote eco-friendly practices. The switch to LED technology for public lighting not only enhances illumination, but also promises substantial energy savings and environmental benefits for generations to come. https://www.youtube.com/watch?v=avFAO7k5Lcs
  Fingal completes Ireland's largest LED switch across its public lighting network LEDinside
- 28. **Three Historic Cricket Grounds Make the Switch to LED Lighting** As the ICC T20 Cricket World Cup captivates the cricket world this month, three of the sport's most historic venues, Kensington Oval in Barbados, Arnos Vale Stadium in St. Vincents and Lord's Cricket Ground in London, have become the first three cricket grounds in the world to install the state-of-the-art MAKO Sports Lighting system. Developed by Syracuse, NY-based M3 Innovation in partnership with specialist stadium lighting design manufacturer, Abacus Lighting, it is the first LED lighting solution designed specifically for cricket. The MAKO system's patented optical lens meets both the new ICC T-24 standards and the more stringent ICC T20 World Cup standards, requiring illumination of greater than 3000 lux across the 22-yard-long by 10-foot-wide wicket.

  THREE HISTORIC CRICKET GROUNDS MAKE THE SWITCH TO LED LIGHTING LEDinside



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### 29. Canada Acts to Further Phase Out Mercury-Containing Lamps -

The Government of Canada announced the publication of the final Regulations Amending the Products Containing Mercury Regulations, which will prohibit the import and manufacture of the most common lamps containing mercury for general lighting purposes as of December 31, 2025. To facilitate the transition to mercury-free alternatives for lamps that are already in use, the regulations will allow a two-year exemption for replacement lamps to continue to be imported or manufactured for pin-base compact fluorescent lamps, straight fluorescent lamps, and non-linear fluorescent lamps until the end of 2027. Retailers will be allowed to sell their stock of replacement lamps until the end of 2029.

Lamps	Start of the prohibition for import and manufacture of lamps	Exemption period for the import and manufacture of replacement lamps	Start date for prohibition on selling lamps
Screw-base compact fluorescent lamp	January 1, 2026	None	None
Pin-based compact fluorescent lamp	January 1, 2026	From January 1, 2026 to December 31, 2027	January 1, 2030
Straight fluorescent lamp	January 1, 2026	From January 1, 2026 to December 31, 2027	January 1, 2030
Non-linear fluorescent lamp	January 1, 2026	From January 1, 2026 to December 31, 2027	January 1, 2030
High pressure sodium vapour lamp	January 1, 2029	Starting on January 1, 2029	None
Metal halide lamp	January 1, 2029	Starting on January 1, 2029	None

Qanada Acts to Further Phase Out Mercury-Containing Lamps - lightED (lightedmag.com)

By Robert Smith, Business Development Executive, Energy Network Services Inc.

### **Monthly Feature:**

### Understanding U.S. Energy Regulations and Standards: Key Updates for 2024 -

Energy regulations are crucial for reducing consumption and setting mandatory requirements for new buildings and renovations. Major U.S. standards like Title 24 of California's regulations, the International Energy Conservation Code (IECC), and ANSI/ASHRAE/IES Standard 90.1 serve as the basis for state codes. While the IECC covers both residential and commercial buildings, ASHRAE focuses solely on commercial properties. Updates to these codes occur every three years, with interim adjustments.

In 2023, the Department of Energy mandated that light bulbs produce at least 45 lumens per watt, effectively banning incandescent bulbs. Additionally, 25 U.S. governors have pledged to eliminate building emissions in their states.

For 2024, major changes include new efficiency credits, the introduction of the Total System Performance Ratio, interior Lighting Power Allowance (LPA) reductions, and more stringent controls on lighting and HVAC systems. Specific updates to California's Title 24 involve reducing LPA from .65 to .6 watts per square foot and implementing detailed occupancy and daylighting controls. While energy regulations aim to cut consumption and mitigate climate change, challenges like occupancy sensor issues and low-flow toilet inefficiencies highlight potential drawbacks. Nevertheless, states like California, Vermont, New York, and Washington lead with stringent codes, while others follow older standards.

The 2024 energy regulations introduce new efficiency credits, a Total System Performance Ratio, reduced Interior Lighting Power Allowance, and updated requirements for egress lighting, fan energy, VAV turndown, and parking garage ventilation.

IECC 2024 is adding additional efficiency credits to align with the new credit option included in ASHRAE 90.1 in 2022. Credits are likely to be available for the following:

- Dimming and tuning
- More occupancy sensors
- Increase in daylight areas
- Light power reduction

Federal tax deductions are also available for new construction and retrofit buildings through incentives such as IRS 179D (for commercial and high-rise buildings) and 45L (for multifamily developers). The 179D tax deduction and its recent changes allow owners, designers, and builders to benefit from significant tax deductions to their energy efficient commercial buildings. Review our guide to the 179D tax incentives for a better understanding of how these deductions work.

More updates to energy regulations are to come to achieve and exceed the goal of becoming energy efficient and carbon-neutral. To know more read this <u>article</u> by <u>Alcon Lighting</u>.

