ENERGY OBSERVER

A MONTHLY NEWSLETTER FROM AMERLUX®

DEC 2025

Merry Christmas Everybody

VIDEO: Amerlux's Commitment to Best-In-Class, US Made Lighting Design Solutions

Amerlux's Commitment to Best-In-Class, US Made Lighting Design Solutions – First, we want to wish everyone a very Merry Christmas and want to thank you, our customers, for another terrific year. Amerlux, a wholly-owned subsidiary of Delta Electronics, has been a catalyst for change in the lighting industry since 1984—simply by listening to the marketplace. We don't keep up with industry trends. We set them. We believe lighting is as much about "feeling" as it is about "seeing." Our solutions deliver the five elements that exceed today's expectations: rich color, next-level comfort, total control, easy configurability and "capture" to provide added security. We believe in building long-term relations with all our stakeholders, including architects, lighting designers, facility managers and contractors. We understand your goals and problems, then rise to the challenge by offering an array of the most magnificent, top-end lighting solutions in the world—backed by iron-clad guarantees, breathtaking savings and unparalleled service—at a cost-effective price. Our clients' business is our business, their reputation, our reputation, and their bright future, our own. Again, Merry Christmas!

Market Observer

1. **Commercial Construction Soars in September** - Total construction starts were up +3.1% in September to a seasonally adjusted annual rate of $1.26 trillion, according to Dodge Construction Network. Nonresidential building starts rose by +11.9%, residential starts improved +3.6%, and nonbuilding starts fell -6.2% over the month. On a year-to-date basis through September, total construction starts were up +3.5% from last year. Nonresidential starts were up +5%, residential starts were down -4.2% and nonbuilding starts were +10.8% higher over the same period. For the 12 months ending Sept. 2025, total construction starts were up +6.7% from the 12 months ending Sept. 2024. Residential starts were down -1.4%, nonresidential starts increased 6.8%, and nonbuilding starts were up +16.7% over the same period. Commercial Construction Soars in September | Electrical Wholesaling

2. **The AI Cold War That Will Redefine Everything by Josh Chin and Raffaele Huang** - China's leaders were anxious and frustrated. The world's most promising new technology was being dominated by OpenAI, Google and other American companies. The U.S. still has a clear lead, producing the most powerful AI models. China can't match it in advanced chips and has no answer for the financial firepower of private American investors, who funded AI startups to the tune of $104 billion in the first half of 2025, and are gearing up for more. But it has a massive population of capable engineers, lower costs and a state-led development model that often moves faster than the U.S., all of which Beijing is working to harness to tip the contest in its direction. Both countries believe market share for their companies across the world is up for grabs—and with it, the potential to influence large swaths of the global population. The AI Cold War That Will Redefine Everything - WSJ

3. **Trump Meets with Xi, Declares Immediate Cut to Tariffs by Josh Chin Follow and Meridith McGraw** - U.S.- China summit offers relief to both sides while high-stakes rivalry carries on. President Trump and Chinese leader Xi Jinping emerged from their first face-to-face meeting in six years with a temporary truce in the bruising trade fight between the two superpowers. Their agreement lowers immediate tensions between the U.S. and China, which have been locked for months in a bitter struggle over trade and technology that has hurt both their economies. The agreement includes a reduction in stiff U.S. tariffs on Chinese goods in exchange for a pledge by China to crack down on the trade in the chemicals used to produce fentanyl. China also promised to ease the exports of rare earths—minerals that Western manufacturers rely on to make a range of goods. And Beijing promised to buy "tremendous amounts" of American soybeans. Trump Meets With China's Xi, Declares Immediate Tariff Cut - WSJ

4. **Significant Changes to Emergency Lighting Standards Strengthen Building Safety** - The comprehensive review and revision of three key British Standards aim to enhance safety and compliance, as well as provide clearer, more consistent guidance for the design, installation, and maintenance of emergency lighting systems in public and commercial buildings. Emergency lighting is a vital life-saving measure, guiding occupants to safety during evacuations, power outages, or other emergencies. The revised standards address critical areas including system verification, illuminance requirements, circuit integrity under fire conditions, and documentation protocols, ensuring a higher level of safety and compliance across the built environment. Significant changes to emergency lighting standards strengthen building safety - A1 Lighting Magazine

5. **NAED Attends "Unleashing Alaska"** - The event titled "Unleashing Alaska," touched on recent Trump Administration efforts to unleash vast oil, gas, and mineral extraction in the state, and forward-looking efforts to craft durable policy by codifying permitting reform through efforts like the SPEED Act, which NAED supports. According to Citizens for Responsible Energy Solutions (CRES), today's permitting bottlenecks have been estimated to delay $1.5 trillion in projects that are awaiting final approval. Further, these delays are responsible for a 30% increase in construction costs for developments and $140 billion in lost annual revenue. These efforts, combined with broad-based permitting reform, have the potential to have significant impacts on America's capacity to extract more oil, natural gas, and minerals in the future. NAED Attends "Unleashing Alaska" – electrifiED

6. **US Aims to Build $80bn Worth of New Nuclear Power Plants by Neil Gerrard** - The US government has struck up a partnership with the Canadian owners of Westinghouse Electric as part of a plan to build at least $80 billion worth of new nuclear reactors. Westinghouse Electric's owners, Canada-based Cameco, which supplies uranium and nuclear fuel services, and Brookfield Asset Management, confirmed the strategic partnership to accelerate the deployment of nuclear power in the US. he US government is expected to arrange financing and secure permits for the new nuclear plants in return for a 20% share of future profits, after Westinghouse has paid out profits of $17.5 billion to Brookfield and Cameco. A national deployment of the reactors could generate 100,000 construction job. US aims to build $80bn worth of new nuclear power plants - Construction Briefing

7. **Toyota to Invest $912 Million in U.S. Plants to Increase Hybrid Vehicle Production by Michael Wayland** - Toyota Motor on Tuesday announced plans to invest $912 million in U.S. manufacturing plants in five Southern states as part of a previously announced plan for the company to invest up to $10 billion domestically by 2030. The investments announced Tuesday are broadly meant to support increasing production of hybrid vehicles, which Toyota leads with a more than 51% market share through the third quarter of this year, according to Motor Intelligence data. Most of the investments are expected to be completed by 2027. The investments are expected to create 252 new jobs. Toyota and the entire automotive industry have been trying to navigate production plans amid regulatory changes impacting all-electric vehicles and Trump's litany of tariffs this year on new vehicles and auto parts. Toyota to invest $912 million in U.S. plants to increase hybrid vehicle production

8. **Nvidia Becomes First $5 Trillion Company** - It seems nothing can stop Nvidia. This week it became the first company ever to smash through a $5 trillion market value—thanks to a frenzy of AI deals spanning everyone from OpenAI and Oracle to Nokia and even drugmaker Eli Lilly. CEO Jensen Huang's MAGA-friendly speech in D.C. also juiced gains. Sure, many are whispering "AI bubble," but for now Nvidia is worth more than entire chunks of the S&P 500, like utilities, industrials or consumer staples. Basically, everything that doesn't require a GPU. Nvidia Becomes First $5 Trillion Company - WSJ

9. **Trump Expands Critical Minerals List to Copper, Met Coal, Uranium** - The Trump administration on Thursday added 10 minerals to a list it deems essential for the U.S. economy and national security, including copper, vital to electric vehicles, power grids, and data centers, and metallurgical coal, used to make coke fuel for steel production. The Interior Department's critical minerals list guides federal investments and permitting decisions and helps shape the government's broader minerals strategy. The administration is expanding the list amid efforts to boost domestic mining and cut reliance on imports, particularly from economic rival China. Trump expands critical minerals list to copper, met coal, uranium | Reuters

10. **Meta to Spend $600bn on US Data Centers by 2028** - Meta claims it will spend $600 billion on digital infrastructure in the US over the next three years. Data centers are "crucial" to helping the company reach its goal of "building superintelligence for everyone" and "helping America maintain its technological edge," the post said. Quite how Meta intends to fund this is unclear. The company posted annual revenue of $62.3 billion in 2024, and $600 billion figure is more than double the amount the firm has made during its 15 years as a public company. Meta has around 30 data center campuses in operation or development globally. Meta to spend $600bn on US data centers by 2028 - DCD

11. **Microsoft CFO Highlights Record $35B in AI Infrastructure Spending** - Microsoft CFO Amy Hood revealed a record $34.9 billion in infrastructure expenditures for the first quarter, emphasizing heavy investment in GPUs, CPUs, and datacenter infrastructure to meet surging demand for artificial intelligence. This capex figure significantly exceeded prior forecasts and reflects the company's commitment to rapidly expanding capacity to support AI-driven growth and customer needs. Microsoft's CFO Highlights Record Capex, OpenAI Deal in Internal Memo - Business Insider

12. **Google to Invest $40B in AI Data Centers, Workforce Training Across Texas by Claire Hao, James Osborne** - Google plans to invest $40 billion into artificial intelligence data centers and related workforce training across Texas through 2027. That includes plans to build three new data centers - two in Haskell County and one in Armstrong County. It's the latest massive investment from tech giants racing to surpass each other in the development of artificial intelligence. Amid this rush, Texas has emerged as one of the most attractive states for new data centers, given its ample land, relatively cheap electricity for large industrial users and abundant energy resources. Google to invest $40B in AI data centers, workforce training across Texas

13. **Google Has a 'Moonshot' Plan for AI Data Centers in Space** - Google has dreamed up a potential new way to get around resource constraints for energy-hungry AI data centers on Earth — launching its AI chips into space on solar-powered satellites. It's a 'moonshot' research project Google announced today called Project Suncatcher. If it can ever get off the ground, the project would essentially create space-based data centers. Google hopes that by doing so, it can harness solar power around-the-clock. The dream is harnessing a near-unlimited source of clean energy that might allow the company to chase its AI ambitions without the concerns its data centers on Earth have raised when it comes to driving up power plant emissions and utility bills through soaring electricity demand. Google has a 'moonshot' plan for AI data centers in space | The Verge

14. **Now Tech Moguls Want to Build Data Centers in Outer Space by Tim Higgins** - Energy constraints in the artificial-intelligence race are causing tech companies to think out of this world. The world's richest men are earnestly talking about traveling to outer space to build gigantic data centers to run artificial-intelligence models among the stars. They argue such missions make the most sense for powering energy-hungry operations. Such talk comes as his Blue Origin and Elon Musk's SpaceX rocket companies are working to make space travel cheaper and routine. It isn't clear what's closer to being real: Moon bases or superintelligent AI? The argument essentially boils down to the belief that AI's needs are eventually going to grow so great that we need to move to outer space. There the sun's power can be more efficiently harvested. To be clear, the current economics of space-based data centers don't make sense. But they could in the future, perhaps as soon as a decade or so from now. Now Tech Moguls Want to Build Data Centers in Outer Space - WSJ

15. **Anthropic, Microsoft Announce New AI Data Center Projects as Industry's Construction Push Continues by Matt O'Brien** - Artificial intelligence company Anthropic announced a $50 billion investment in computing infrastructure on Wednesday that will include new data centers in Texas and New York. Microsoft also on Wednesday announced a new data center under construction in Atlanta, Georgia, describing it as connected to another in Wisconsin to form a "massive supercomputer" running on hundreds of thousands of Nvidia chips to power AI technology. The latest deals show that the tech industry is moving forward on huge spending to build energy-hungry AI infrastructure, despite lingering financial concerns about a bubble, environmental considerations and the political effects of fast-rising electricity bills in the communities where the massive buildings are constructed. Anthropic, Microsoft announce new AI data centers

16. **Trump Wins Saudi Pledge to Boost US Investment to $1 Trillion** - Mohammed bin Salman pledged to increase Saudi investment to $1 trillion. The original $600 billion plan envisioned expanded Saudi trade and investment over four years, spanning energy, infrastructure, technology and defense cooperation. Recent deals linked to the pledge already include huge orders for U.S. weapons and advanced artificial-intelligence hardware, as Saudi-backed firms sign agreements with chipmakers and cloud providers to build data centers and AI hubs. The money is expected to land in U.S. factories, energy projects, construction, and cutting-edge tech. Trump Wins Saudi Pledge to Boost US Investment to $1 Trillion | Newsmax.com

Industry Resources

17. **Final Version of DesignLights Consortium's New Technical Requirements for LED Lighting Released** - The SSL V6.0 and LUNA V2.0 Technical Requirements are now combined in a single set of technical requirements and scheduled to take effect in January.

Key updates to SSL V6.0 include:

- A major revision to the DLC Premium product classification for luminaires with higher efficacy thresholds and more rigorous requirements for controllability, expanding the classification to further enable incentives for advanced controls and integrated building systems.
- Provisions to drive wider adoption of controls through compatibility-based product selection from the SSL and Networked Lighting Controls (NLC) QPLs.
- Expanded SSL QPL eligibility to support sustainability, lighting innovation and flexible installation practices.
- Clear criteria and improved documentation for manufacturers and specifiers.

Overall, the new technical requirements for LED lighting maintain an average increased efficacy threshold across all DLC qualified product types of 14 percent. Full details of SSL V6.0 and LUNA V2.0 are available the DLC's website

18. **MIT Sloan Executive Education Programs** - Our programs offer hands-on learning experiences and cutting-edge research to empower you to tackle today's challenges and seize tomorrow's opportunities.

- **Courses for Individuals** - MIT Sloan Executive Education courses provide hands-on learning experiences, faculty research, and proven frameworks that have immediate applicability to careers and organizations.
- **Executive Certificates** - Pursuing an Executive Certificate enables you to further your business knowledge and skills on a schedule of your own design.
- **Solutions for Organizations** - Whether you're launching a new product, entering a new market, or going global, you need o be absolutely sure your team is ready. That's why our custom programs are tailored to your organization's specific challenges and opportunities.
  Executive Education Programs | MIT Sloan

19. **Unlocking Smart Efficiency: Your Guide to AI-Ready Buildings** - Discover how AI can optimize energy, comfort, and operations and how you can lead smarter, more sustainable buildings. Navigate the transition to AI-ready buildings. This white-paper offers insights into energy optimization, alarm management, sustainability reporting, and predictive maintenance. Gain actionable strategies, real-world case studies, and a clear roadmap to harness AI for smarter, more efficient, and future-proof building operations. Unlocking Smart Efficiency: Your Guide to AI-Ready Buildings | Buildings

Life Is On Schneider Electric

Articles of Interest

20. **6 Defining Manufacturing Trends of 2026 by Bernard Marr** - In 2026, focus is shifting from excitement over what AI can do in manufacturing to a more mature, considered understanding of what human-machine collaboration should look like in practice. Industries that gained first-mover advantage by adopting cognitive, connected processes are developing a deeper awareness of the challenges, complexities and cultural changes created by Industry 4.0. So here are what I believe will be the key trends driving the next phase of the industrial revolution as we head into 2026. 6 Defining Manufacturing Trends Of 2026

1) **Cognitive Industry: The Rise of Industrial AI Agents in Manufacturing & Industry**
2) **Generative Design: From Pilot to Production**
3) **Industrial Extended Reality**
4) **Intelligent Supply Chains**
5) **Smart Materials in Manufacturing**
6) **Industry 5.0: Human-Centric, Sustainable Automation**

21. **Smart Building Systems Cut Energy Waste. AI Makes Them Even Smarter by Steven Nadel** - Many commercial buildings in the United States waste energy needlessly and have significant opportunities to become more efficient. Properties ranging from hospitals, to retail stores, to hotels can cut their utility bills by installing building energy management and control systems (BEMCS) that optimize heating, cooling, and other energy systems and help building operators understand how energy is being used and how to improve performance. Advances in technology, including the rise of artificial intelligence (AI), have made these systems even more effective in recent years. ACEEE examines BEMCS and their potential to optimize buildings' energy use in three briefs published today:

1) Unlocking Energy Savings Using Building Energy Management Control Systems
2) The Use of Artificial Intelligence in Building Energy Management Control Systems
3) Building Energy Management Control Systems for Small and Medium Commercial Buildings

Smart Building Systems Cut Energy Waste. AI Makes Them Even Smarter | Energy & Sustainability | FacilityExecutive.com

22. **Humanoid Robots in the Construction Industry: A Future Vision** - General-purpose robots could be useful in a range of construction activities, from moving heavy concrete blocks to welding and plumbing. Although these robots come in various forms, humanoids—those that resemble people in size and shape—attract the most attention. Humanoids are still relatively early in development, but they could potentially transform industries if developers and other stakeholders can overcome technological, regulatory, financial, and operational hurdles. Although humanoids are not yet a fixture at construction sites, they represent a potentially transformative solution to the productivity crisis. Their power comes from embodied AI, a technology that enables real-time decision-making. Rather than waiting for full-scale deployment to become a reality, forward-looking construction leaders should begin preparing now for a future in which humanoids and humans work together. Those who prepare now will be best positioned to seize the opportunities ahead. Humanoid robots involved in multiple4 construction sites at: Humanoid robots in the construction industry | McKinsey

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LearnersLive Special Feature

BriteSwitch: Rebates Bloom as Horticulture Lighting Market Heats Up - Once limited to research labs and specialized grow rooms, horticulture lighting has become one of the **fastest-growing segments in the lighting industry**. As technology costs drop and efficiency improves, these systems are now used in greenhouses, vertical farms, floriculture, and even in facilities producing plant-based vaccines. The global market is expanding at **roughly 12% per year** and is projected to reach $22 billion by 2033, making it one of the brightest opportunities for both lighting manufacturers and rebate-driven projects. Like they did with traditional lighting, LEDs have revolutionized grow lights. With **20 to 45% less energy usage** than conventional HID grow lights, they provide a huge opportunity to cut operating costs for growers. The reduced wattage also means less waste heat, which is hugely beneficial to indoor growing operations. In October 2019, the DesignLights Consortium (DLC) created a new standard and Qualified Products List (QPL) specifically for horticulture lighting. Over the years, the DLC has become the de facto standard utilities use to ensure customers install high-quality lighting when applying for incentives. In 2025, the DLC released version 4.0 of its technical requirements. **55% of the US is covered by an active horticulture lighting rebate; 53% are calculated on a per-fixture basis. BriteSwitch Can Help You Find and Capture the Rebates:**

- **RebatePro to Find Horticulture Rebates https://briteswitch.com/rebatepro-for-lighting.php**
- **Outsourcing Rebate Processing https://briteswitch.com/news/OutsourcingRebates.php**

Rebates Bloom as Horticulture Lighting Market Heats Up