

**Amerlux® has opened a state-of-the-art 7,000 square-foot showroom, lounge and conference area in its new corporate headquarters based in Oakland, NJ.**

Clients will learn firsthand how to realize the power of the latest technologies. The Amerlux Showroom will guide you through application, control, color tuning and warm dim real-life applications. Amerlux gives clients a space to build out their vision before the final design is inked. Deep dive into the new showroom, and research and test the latest fixtures, controls and technologies.

“Our new showroom is an elegant lighting application center that demonstrates how to use the latest LED technologies while doubling as a classroom for hands-on training of what goes into an Amerlux product that makes it so Special,” said Amerlux CEO/President Chuck Campagna. “The room can be used for actual interactive AIA/OEU courses, and to host meetings for the local chapters of the AIA, IES and other professional organizations. It also can be used for training sessions and educational seminars to distributors, contractors and the lighting community.”

Amerlux is installing a giant interactive wall unit that will be capable of bringing the showroom to customers’ offices, as well as transporting customers into the showroom via the web. The presenter will have a mobile camera and microphone to bring the Amerlux experience to those that can’t make the trip to the facility.

“Displays include urban apartments, offices, retail, hospitality, supermarkets, commercial and exterior spaces, as well as a black room lab,” said Mr. Campagna. “They are all designed to be re-lit quickly with any product that our customers may want to see.”

The architecturally styled showroom was built with 24-foot ceilings and removable walls that provide the ability to change ceiling heights and space dimensions for various applications and environments. Optimal store displays and commercial settings can be built quickly to work out design issues before the final specifications of a project. The black room/test lab is available to view comparisons of color rendering and beam control, as well as light distribution at a height of up to 24 feet.

Advanced technologies demonstrate Warm Dimming, Color Tuning, IoT, and Superior Optics that deliver the most effective and efficient beams of light. Users and designers are invited to select from a myriad of the industry’s latest controls that are most suited to meet their needs and include everything from IoT to Photocell and Motion, as well as Color Rendering and Dimming. Additionally, Data Collection sensors that reveal consumer purchasing analytics, and tools that grow plants and “produce” under illumination, will be available.

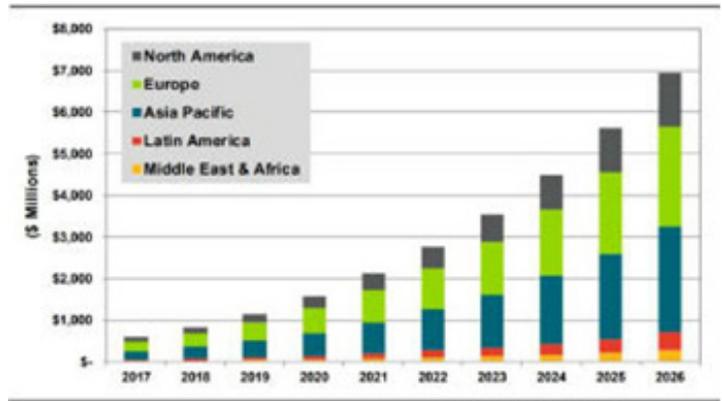
“Our new showroom is here to use and all are welcome to utilize it for their next lighting event,” continued Mr. Campagna. “Customers and designers can come kick the tires ‘Per se,’ to make sure they are using the proper lighting fixtures in their layouts. Come and witness first-hand our passion for lighting and dedication to creating high-performance lighting custom tailored to your exact specifications.”

Contact us at [InnovationCenter@amerlux.com](mailto:InnovationCenter@amerlux.com) to schedule your visit



## LED Energy Market Observer:

**1. Smart Street Lighting for Smart Cities to Reach 73 Million Installed Units by 2026** - This Navigant Research report analyzes the evolution of smart street lighting technology and market trends, with a focus on how smart street lighting can be used as a platform for additional smart city applications. Smart LED streetlights LEDs are now the standard replacement for legacy lighting in most cities around the world. At the same time, smart controls are becoming more mainstream and are increasingly installed alongside LED deployments. Adding controls to street lighting systems offers many benefits, but controls technology is not being adequately exploited. The vision of a city lighting network is one that provides a platform for a range of innovative smart solutions, helping cities increase efficiency, raise additional revenue, keep residents safe, improve sustainability, and make them attractive to new residents and businesses. <http://www.navigantresearch.com/research/smart-street-lighting-for-smart-cities>



**2. The National Academy of Sciences, Engineering, and Medicine (NAS) Has Published a Report** - Entitled Assessment of Solid-State Lighting, Phase Two. The DOE SSL Program features prominently in the new report, as the lead federal organization driving SSL advances. The new report focuses on three key areas: commercialization (noting the rapid uptake of SSL since the 2013 report), technology development (updating the findings of the 2013 report), and manufacturing. In the process, the NAS committee has updated material that was presented in the earlier study. <https://www.nap.edu/catalog/24619/assessment-of-solid-state-lighting-phase-two>

**3. Connected Public Lighting: A Powerful Accelerator for Smart Cities by Susanne Seiting** - The analyst firm Gartner calculates that 8.4 billion connected objects will be in use in 2017, an increase of 31 percent from 2016.[1] As urban migration increases and connected devices proliferate, these parallel trends promise new links between physical spaces and digital infrastructures that increasingly include light-emitting diode (LED) street lighting, site lighting, and architectural lighting. For municipalities, these two trends present an opportunity and a challenge. Cities small and large are flourishing, but the strain on infrastructure and services is burgeoning. Leaders increasingly reference the potential for real-time information and controls that improve city services and enhance quality of life. [http://www.nxtbook.com/ygsreprints/NEMA/g78283\\_nema\\_july2017/index.php#/12](http://www.nxtbook.com/ygsreprints/NEMA/g78283_nema_july2017/index.php#/12)

**4. Bluetooth's Range Just Widened, and IoT Lighting Companies are Thrilled** - After at least two years of internal wrangling and difficult technology choices, the Kirkland, WA-based Bluetooth Special Interest Group (SIG) ratified a means to mesh together Bluetooth beacons, allowing them to hand off instructions to each other. The move effectively boosts Bluetooth's reach far beyond the 30 ft that is typical for the Bluetooth that consumers commonly use to share things like audio files among smartphone, computers, tables, TVs, and other devices. The mesh standard applies across all possible commercial, industrial, and residential information technology uses. The lighting industry is one group in particular that is welcoming the move. As LEDs has been reporting for some time, mesh could help buoy IoT lighting, making it more likely that smart lights can cover large areas of retail stores, warehouse, commercial offices, and other locations. <http://www.ledsmagazine.com/>

5. **Eleven New SBIR-STTR Grants Awarded for SSL Technology** - The U.S. Department of Energy Office of Science has awarded 10 Small Business Innovation Research (SBIR) grants and one Small Business Technology Transfer (STTR) grant for projects targeting critical advances in solid-state lighting (SSL) technology. The 11 FY17 grants will explore the technical merit and commercial potential of different innovative concepts or technologies that are expected to contribute to the achievement of the price and performance goals described in DOE's SSL R&D Plan. Complete list at: <https://energy.gov/eere/ssl/eleven-sbir-sttr-grants-selected-award-ssl-technology-fy17>

6. **How is DLC 4.2 Affecting Rebates?** - Earlier this year, Design Lights Consortium (or "DLC") implemented a new version of their LED specifications. They were meant to further advance LED technology in the marketplace and, for most LED products, it required improved efficacy (increased lumens per watt). On April 1st, products that did not meet this specification were removed from the DLC list. It is crucial that you verify the product you are using is on the most current DLC 4.2 list. You can see it listed at: <https://www.designlights.org/search/?search=DLC%204.2> For additional information on rebates: <http://briteswitch.com/news/DLCandRebates.html>

7. **Want to Know More About Power over Ethernet (PoE)? Check out: LuxReview** -

- <http://luxreview.com/article/2017/07/igor-answers-your-power-over-ethernet-poe-questions>
- <http://luxreview.com/article/2017/07/can-i-install-poe-at-home-and-what-would-that-look-like-to-me>
- <http://luxreview.com/article/2017/07/what-are-the-practical-benefits-of-poe-and-what-can-be-powered-and-controlled-by-poe-today->
- <http://luxreview.com/article/2017/07/what-does-it-look-like-to-install-poe-and-who-can-do-it>
- <http://luxreview.com/article/2017/07/how-does-power-over-ethernet-poe-lighting-work->

8. **Current, Powered by GE Reaches Digital Lighting Milestones with 200 Million Square Feet of Wireless Controls** - Over the past year, the company has expanded its development partner ecosystem to more than 100 companies, and its Daintree wireless control networks are now installed across locations spanning 200 million square feet of space in commercial buildings, retail stores and industrial facilities. Current combines the capabilities of GE's energy-efficient LEDs with cutting-edge sensors and software built on the power of Predix, GE's operating system for the Industrial Internet. In April 2016, Current acquired Daintree Networks to expand its digital capabilities for small and mid-sized buildings and enhance its intelligent lighting portfolio. <http://lightingcontrolsassociation.org/>

9. **Lumileds Is Now Officially an Independent Company** - Lumileds announced that funds affiliated with Apollo Global Management, LLC and Royal Philips completed their previously disclosed transaction, resulting in Lumileds operating as an independent company. As announced in December 2016, Apollo and Philips agreed to a transaction where Philips would sell 80.1% interest in Lumileds to certain funds managed by Apollo and retain the remaining 19.9% interest in the company. Apollo is a leading global alternative investment manager with assets under management of approximately USD 197 billion\* in private equity, credit and real estate funds, invested across a core group of nine industries, where Apollo has considerable knowledge and resources. <http://bizled.co.in/lumileds-is-now-officially-an-independent-company/>

10. **DOE Publishes CALiPER Snapshot on LED Downlights** - There are many factors that influence product efficacy, but the efficacy trend with LED downlights is concerning. The importance of efficacy gains is not solely related to energy savings. Improved LED package efficiency can simplify thermal management and allow more flexibility in product design, ultimately reducing product cost. With the average LED Lighting Facts-listed downlight at just over one-third of the DOE target for efficacy for LED luminaires (203 lm/W by 2025), there's substantial room for continued performance gains, which should not be overlooked. For a closer look at the findings, download at: <https://energy.gov/eere/ssl/downloads/snapshot-downlights>

11. **The Lighting Fixtures Market in the United States by CSIL Milano** - The value of USA domestic market in 2016 is estimated to be \$20.3 billion, with a 3% increase compared to 2015. US production of lighting fixtures in 2016 amounted to \$12.9 billion. In 2015, it overcame the pre-crisis level and in 2016 continued its positive trend (+11.6% on the previous year). More specifically, the production of residential lighting remained stable, ending the negative trend that characterized the previous years; while the production of professional luminaires kept on growing at high rates. On the other hand, international trade faced a setback as both imports and exports contracted by respectively 9% and 8%. The LED-based segment reached 51.4% of the total market in 2016; it has been growing especially for the outdoor lighting applications, where today it accounts for around 70% (10 percentage points more than the year before). Overall, in 2016, the growth rate of LED fixtures consumption was 26%. <https://www.lighting.csilmilano.com/report/the-lighting-fixtures-market-the-united-states-0058484.html>

12. **Revised Standard on Solid-State Lighting Extends Chromaticity Range** - In a revision of ANSI C78.377-2017 American National Standard for Electric Lamps—Specifications for the Chromaticity of Solid-State Lighting Products, the ANSI Accredited Standards Committee C78, Electric Lamps, establishes a range of chromaticity for general lighting with solid-state lighting (SSL) products to ensure that product chromaticity can be communicated to consumers. This revision extends the range of color points for general lighting with energy efficient SSL lighting products. It specifies chromaticity regions below the blackbody (Planckian) locus that are suitable for some lighting applications. Annex E Extended Specifications includes recent studies supporting the premise that light sources with chromaticity in the extended correlated color temperature categories are adequate for many applications. [http://www.techstreet.com/nema/standards/ansi-c78-377-2017?product\\_id=1986630](http://www.techstreet.com/nema/standards/ansi-c78-377-2017?product_id=1986630)

13. **Potential Risks to Human Health of Light Emitting Diodes** - Following a request from the European Commission, the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) reviewed recent evidence to assess potential risks to human health of Light Emitting Diodes (LEDs) emissions. The review of the published research conducted by the SCHEER has led to valuable conclusions and identified certain gaps in knowledge on potential risks to human health from LEDs. The Committee concluded that there is no evidence of direct adverse health effects from LEDs emission in normal use (lamps and displays) by the general healthy population. There is a low level of evidence that exposure to light in the late evening, including that from LED lighting and/or screens may have an impact on the circadian rhythm. At the moment, it is not yet clear if this disturbance of the circadian system leads to adverse health effects. [https://ec.europa.eu/health/sites/health/files/scientific\\_committees/scheer/docs/scheer\\_o\\_011.pdf](https://ec.europa.eu/health/sites/health/files/scientific_committees/scheer/docs/scheer_o_011.pdf)

14. **Nanoparticles Can Boost LED Lighting Efficiency by 50%** - In an advance that could boost the efficiency of LED lighting by 50 percent and even pave the way for invisibility cloaking devices, a team of University of Michigan researchers has developed a new technique that peppers metallic nanoparticles into semiconductors. It's the first technique that can inexpensively grow metal nanoparticles both on and below the surface of semiconductors. The process adds virtually no cost during manufacturing and its improved efficiency could allow manufacturers to use fewer semiconductors in finished products, making them less expensive. <http://bizled.co.in/nanoparticles-can-boost-led-lighting-efficiency-by-50/>

15. **Change Catches Up with GE by Doug Chandler** - The U.S. electrical industry has been buzzing with speculation about the direction of one of its foundational companies following announcements that General Electric is looking for a buyer for GE Lighting and that long-time chief executive Jeffrey Immelt will step down in August. Rumors have circulated for years that GE would part ways with another of the business lines on which it rose to be one of the most recognized brands in the world. Ever since the company divided its lighting business, gathering its consumer and legacy lighting at Nela Park in a group with electrical systems and appliances while moving its higher-end LED and connected lighting systems under Current, Powered by GE at the new Boston corporate headquarters, the industry has expected GE to divest lighting. When it sold off its iconic appliances business in 2016, the picture became clearer. <http://www.ewweb.com/business-management/change-catches-ge>

16. **How Two Entrepreneurs Found An LED Lighting Niche And Built A Booming Business** by Jeff Kauflin – Cole Zucker, 33, and his 35-year-old cofounder, Guillaume Vidal, are co-CEOs of Green Creative, a profitable lighting manufacturer with 70 employees and \$52 million in revenue. Their bulbs illuminate the aisles of many Walmart, Whole Foods and J. Crew stores. In a market dominated by Philips, GE and Osram Sylvania, Vidal and Zucker saw an opening when LED technology started to take off. They bet that the giant firms were ill-equipped to make the most of the rapidly evolving technology. “We used to worry about whether anyone would buy LED products,” Zucker says. “Now we worry about how to maintain our breakneck growth rate.” In the winter of 2010, Zucker moved to San Francisco to handle sales, while Vidal stayed in Shanghai to find a factory that could make the lights. <https://www.forbes.com/sites/jeffkauflin/2017/05/23/how-two-entrepreneurs-found-an-led-lighting-niche-and-built-a-booming-business/#c9cf85d58163>

17. **Luminaire-Integrated Controls** by Craig DiLouie -The lighting controls revolution features three notable trends promoting integration of control with light. The latest commercial building energy codes promote complex control schemes. The LED source is highly controllable. And sensors and microprocessors have become miniaturized. Just as the luminaire has become a device integrating light source and fixture, a growing number of luminaires now also integrate sensors and controllers. In a typical traditional lighting system, hardware (luminaire), sensors (control inputs) and lighting controllers (microprocessors governing control operation) are installed separately. Sensors are connected to luminaires, and control inputs may be aggregated at a control panel featuring a controller. The ongoing miniaturization of sensors and controllers allows both to be embedded in luminaires, while volume manufacturing has reduced their cost. <http://lightingcontrolsassociation.org/2017/07/26/luminaire-integrated-controls/>

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## Global Energy Market Observer:

18. **ABB Acquires Communications Network Business** - ABB announced it has agreed to acquire the mission-critical communication business of the Keymile Group to strengthen its communication networks portfolio. The acquisition will bring with it key products, software and service solutions, as well as research and development expertise. These will further enhance ABB's industry-leading digital offering, ABB Ability, by adding extremely reliable communications technologies that are essential to maintain today's dynamic and complex digital electrical grids. <https://www.tedmag.com/>

19. **LEDvance Sees Immense Potential in China & Asia-Pacific Lighting Markets** - LEDvance, a global lighting provider based in Germany, is making all efforts to penetrate the China market with its digital and intelligent LED lighting products and lighting solutions. China the single biggest lighting market globally, and the entire Asia-Pacific region which is ever-growing, are important markets for LEDvance to target. LEDvance is investing in digital and intelligent LED products to meet the local demand in China. It is extending its product line from standardized and traditional light sources to advanced LED lamps and intelligent lighting products. Lawrence Lin, Executive General Manager at MLS Co., told ChinaDaily that LEDvance is set to become one of the top three lighting corporations within three years. LEDvance has emerged from the general lighting business of Osram. <http://bizled.co.in/ledvance-sees-immense-potential-in-china-asia-pacific-lighting-markets/>

**20. MLS Continued to Lead the Pack of Chinese Lighting LED Packagers** - In the China market, domestic manufacturers gradually became major suppliers of lighting LED sources. The table shown below discloses the top 10 Chinese companies with the biggest revenue market share. MLS's production bases in Xiaolan, Zhongshan and Ji'an, Jiangxi have been ramping up their capacity since 2016. Along with its competitive cost structure and additional market share expansion, the company stayed firmly ahead of other domestic LED packagers. The two plants will constantly beef up their production and another one in Yiwu, Zhejiang is also anticipated to come into operation soon, reflecting the light giant will keep scaling up. It should be noted that MLS (Forest Lighting in the USA) recently acquired Osram / Sylvania / LEDvance. <http://www.ledinside.com/>

Ranking	Top 10 for 2015	Top 10 for 2016	Change in Ranking
1	MLS	MLS	→
2	Honglitronic	Honglitronic	→
3	Lightning Opto	Lightning Opto	→
4	Refond	Refond	→
5	ChangFang Lighting	Shenzhen MTC	↑
6	Shenzhen MTC	NationStar	↑
7	Runlite	APT	↑
8	Mason	ChangFang Lighting	↓
9	NationStar	Runlite	↓
10	APT	Xindec0	New

**21. Continental, Osram Plan Vehicle Lighting Joint Venture** - Osram wants to submit parts of its automotive lighting business to the joint venture while Continental will bring in electronic control systems, the weekly magazine said in an advance release to be published in its Friday edition. The joint venture will start early next year, employ about 1,500 workers and have both companies submit operations worth between 200 million euros (\$228.32 million) and 300 million euros of sales each to the new business, the magazine said. <https://www.reuters.com/article/us-continental-osram-idUSKBN19X2E1>

**22. Global LED Lighting Market Expected to Reach USD 54.28 Billion by 2022** - Growing at a CAGR of 13% between 2017 and 2022, the Zion Market Research report analyzes and estimates LED lighting market on a global and regional level. The report offers past data of 2016 along with estimation from 2017 to 2022 based on revenue (USD Billion). Assessment of market dynamics offers a brief thought about the drivers and restraints for the LED lighting market along with the impact they have on the demand over the forecast period. Additionally, the report includes the study of opportunities available in the LED lighting market on a global level. The regional segmentation comprises the current and forecast demand for the Middle East & Africa, North America, Europe, Latin America and Asia Pacific for LED lightings market. <https://www.zionmarketresearch.com/>

**23. Smart Lighting Market Predicted to Reach \$48.12 Billion by 2022** - A report from analyst Infoholic Research pegs the emergence of smart cities, demand for green buildings, government initiatives, awareness about energy efficiency and demand for IoT-based solutions as the key drivers that “will ensure a high growth trajectory for the smart commercial lighting market during the forecast period.” Market growth, however, may be restricted by high costs, cyber threat and lack of awareness among people. The market was segmented and studied by the following geographies: Americas, Europe, Asia-Pacific and Middle East and Africa. <https://www.ies.org/lda/smart-lighting-market-predicted-to-reach-48-12-billion-by-2022/>

**24 Helsinki's Smart Street Lights Will Find You a Parking Place** - The city of Helsinki has installed internet-connected street lights which find motorists a parking place. The pilot deployment uses miniature Internet-Protocol video cameras mounted on the luminaires to monitor the spaces. These cameras generate data which is interpreted by cloud-based image analytics to assess if the parking space is available. Continuous tracking of parking spaces also helps identify parking bottlenecks and offers a means to enable traffic guidance. In the future, outdoor luminaires could provide light indications, making it easy to identify open parking places on city streets. The lighting industry sees huge potential in street lighting becoming the digital backbone of smart cities. <http://luxreview.com/article/2017/07/helsinki-s-iot-street-lights-will-find-you-a-parking-place>

25. **CSIL Lighting Fixture Market Research Worldwide** - <https://www.lighting.csilmilano.com/> Founded in Milan (Italy) in 1980, the Centre for Industrial Studies (CSIL) is an independent research and consulting company specialised in applied economic research, evaluation of public investment projects, infrastructure project appraisal, support to development programmes and policies, MARKET analysis and SMEs economics. Latest research publications available on:

- <https://www.lighting.csilmilano.com/report/the-lighting-fixtures-market-the-united-states-0058484.html>
- <https://www.lighting.csilmilano.com/report/the-european-market-lighting-fixtures-part-i-0058457.html>
- <https://www.lighting.csilmilano.com/report/the-lighting-fixtures-market-china-0058542.html>
- <https://www.lighting.csilmilano.com/report/the-lighting-fixtures-market-japan-south-korea-0078885.html>
- <https://www.lighting.csilmilano.com/report/commerce-lighting-fixtures-sector-0058520.html>
- <https://www.lighting.csilmilano.com/report/leds-and-the-worldwide-market-for-lighting-fixtures-0058638.html> (coming soon)
- <https://www.lighting.csilmilano.com/report/the-lighting-fixtures-market-australia-0058570.html> (coming soon)

## National Energy Market Observer:

26. **LIGHTFAIR® International 2018 Call for Speakers** - The LIGHTFAIR® International (LFI®) Conference, which offers hundreds of hours of education in a highly diverse curriculum, begins its run to opening day 2018 with the Call for Speakers launching on July 11, 2017. This global invitation calls for top professionals from a broad spectrum of industries to submit to speak at the world's largest annual architectural and commercial lighting trade show and conference in Chicago at McCormick Place May 6 – 10, 2018 (Pre-Conference LIGHTFAIR Institute®: May 6 – 7; Trade Show & Conference: May 8 – 10). For the 2018 LIGHTFAIR Conference, experts are invited to submit ideas to share expertise and experience within the following focus areas: Lifeforms, Environments, Influences and Practices. These topics may be addressed in the context of Inspiration, Applications, Research, Design and/or Tools & Technologies. <http://www.lightfair.com/lightfair/V40/index.cvn?id=10466#/WW-kl7pFzi0>

27. **What Is Amazon's Obsession with Electrical Supply? by Bridget McCrea** - A look at why the e-tailing giant is actively claiming market share in the electrical distribution space with its Amazon Business division. "If distribution can't provide significant and measurable value, it doesn't belong in the sales equation," wrote Chris Brown, CEO Wiedenbach-Brown, in tED magazine. "A simple answer to the question is to become invaluable to the manufacturer, the end user, or to both. And that answer is also a partial solution to the Amazon Business challenge, which is more dangerous to at least the commodity product aspect of distribution." Well, we're halfway through 2017 and it looks like Amazon Business' foray into electrical supply has gotten even more serious since Brown penned his article in 2015. The question is, what is this e-tailing behemoth's obsession with the industry and why is it putting time, effort, and money into conquering it? <https://www.tedmag.com/>

28. **Cheryl English Assumes Presidency of the IES (2017-2018)** - Effective July 1, 2017, Cheryl English succeeds Shirley Coyle. Cheryl English has been a member of the IES for 35 years. She has worked for Acuity Brands in a number of positions including application design, testing, education and marketing, culminating in her current position as Vice President, Government and Industry Relations. On behalf of the IES, English helped develop the Joint IDA-IES Model Lighting Ordinance, the IES classification system for Outdoor Luminaires (TM-15) and the first series of IES ED education programs. She has served on a variety of IES committees and has been awarded the Distinguished Service Award, the Fellow Award, and an IES Presidential Award. <https://www.ies.org/pressroom/cheryl-english-assumes-presidency-of-the-ies-2017-2018/>

29. **House Appropriations Committee Votes to Cut Energy Star by 40 Percent** - The House Appropriations Committee voted on July 18 to pass the Fiscal Year 2018 Interior and Environment Appropriations Bill, which provides \$31.4 billion to federal investments in natural resources. This budget is \$824 million less than 2017, and part of that cut is to 2018 Energy Star funding, which would drop to \$31 million, a reduction of 40 percent. The bill is \$4.3 billion more than the Trump administration's budget request. The administration had previously called for the complete defunding of the Energy Star program. <http://www.ecomag.com/section/green-building/house-appropriations-committee-votes-cut-energy-star-40-percent>

## Monthly Feature:

### DC CURRENT MAKING A MAJOR COMEBACK, NATIONAL LIGHTING BUREAU EXPERTS SAY

Shepherdstown, WV – Walk around just about any office in the United States and you'll see dozens of power modules – point-of-use power transformers – plugged into conventional alternating-current (AC) electrical outlets, transforming the incoming AC to low-voltage direct current (DC), for use by telephones, tablets, laptops, and other electronic devices, including light-emitting-diode (LED), electric-illumination installations. Now, lighting-system manufacturers are heading forward to the past, bringing DC circuitry – called “power over ethernet” or PoE – to the office and other workplaces, so point-of-use power transformation will no longer be required. Two experts discussed PoE at the National Lighting Bureau's Annual Lighting Forum during a session called “Illuminating the Future, Part One.” The two experts were:

- Lisa L. Isaacson (NuLEDs), and
- Michael S. “Mike” O'Boyle (Philips Lighting).

*EdisonReport* Editor and Publisher Randy Reid moderated the panel. The video is now available free from the National Lighting Bureau.

According to Isaacson and O'Boyle, PoE differs from conventional DC networks in that the cabling used can carry both power and communications signals, much as a smart phone that receives both power and communications signals when it is connected to a computer via a universal serial bus (USB) connector.

Being able to rely on one cable network for all connected devices permits connected devices to communicate with one another, evolving into an “Internet of things” (IoT) inside each building where the technology is used, and to communicate with other systems and other buildings, to as wide an area as desired. It also enables users to communicate with their lighting, using a smart phone and an app, to increase or decrease the amount of electrical illumination being provided, or to change the color of its output.

The panelists noted that PoE will not eliminate the need for conventional AC circuitry, but it will eliminate the need for AC power transformation when it comes to power for electronic devices. Both panelists also expressed confidence that PoE will likely be installed routinely in the near-term future, not only because of the versatility it provides, but also because it is safer to handle: Line-voltage AC can cause fatal accidents; low-voltage DC is much safer. PoE systems will also become less costly to install, Ms. Isaacson said, because less installation labor is involved. Right now, the cost to install a conventional system or a PoE system is about the same, because PoE's installation-labor savings are offset by higher equipment costs. As more competitors enter the market, and as the equipment becomes more widely available, equipment prices will fall, so that wiring a building with both PoE and AC, where needed, will cost less than wiring a building with AC alone.

Watch “Illuminating the Future, Part One” free of charge at <https://nlb.org/lighting-forum-videos/>