

EnergyWatch



April 2015

<http://www.attardimarketing.com/energywatch/>
www.energywatchnews.com

Groucho Marx:

- *Politics is the art of looking for trouble, finding it everywhere, diagnosing it incorrectly and applying the wrong remedies.*
- *I don't care to belong to a club that accepts people like me as members.*
- *I never forget a face, but in your case I'll be glad to make an exception.*
- *Those are my principles, and if you don't like them... well, I have others.*

Something to Think About...

CONNECTING THE WEAKNESSES BY BILL ATTARDI

The traditional manufacturers have depended on their Supply Chain in the development of the traditional electrical / lighting industry. We all agree..... 'but times, they are a changin'. Chris Brown is putting on his optimistic hat and will talk about Distribution's STRENGTHS next week. Chicken Little, his glass half full alter ego, will talk about Distribution's WEAKNESSES over the next couple of weeks as well. This week however, I want to focus on the WEAKNESSES and ask you if these weaknesses apply to you and will prevail and keep the Lighting Supply Chain from competing effectively in the new digital lighting industry. For this discussion the Supply Chain consists of Independent Manufacturer's Agents, Traditional Electrical / Lighting Distribution and ESCO Channels of Distribution all working together to serve the market, understanding that Contractors, Architects, Lighting Designers, Engineering Firms, even Retailers are in the mix as well.

And as we have said, this is not intended to be a complete list, and everyone is invited to add their own dots. Not all the dots / weaknesses are anywhere near as significant as some, but they could be in the future. **And the connections are usually not within channels but between channels.** Remember we are connecting the dots...those weaknesses common to the traditional supply chain must be identified, acknowledged and corrected or face the consequences..... what weaknesses apply to you and are still endemic in your business?

TRADITIONAL LIGHTING MANUFACTURERS – When change is this dynamic, the incumbent players are always threatened. In a mature industry like lighting that has seen gradual change, you can get by by being mediocre but not now. The entire traditional network of serving the new needs of their customers is under fire. Weaknesses are amplified.

1. Not accustomed to dynamic change
2. Innovation not a priority – fast follower good enough mentality
3. Ability to compete with low cost producers, especially foreign
4. Dependent on Supply Chain for End-User relationships
5. Depreciated investments in making the existing product lines
6. Insufficient profits to make necessary new significant investments
7. Social network for content marketing
8. Salaried sales force vs. independent rep network dilemma
9. Ability to control events
10. Reality-based vision

INDEPENDENT MANUFACTURER’S AGENCIES - The first channel of distribution for the electrical industry has been the Independent Manufacturer Representative. Here are some of their weaknesses that, in my view, need to be addressed:

1. Short-term sales focus...*instant gratification not fast enough*
2. Generally do not sell to the end-user executive management levels
3. Limited resources for significant investment
4. Geographical constraints – do not serve national accounts....more local coverage
5. Reliable feedback.....self-interests prevail
6. Loyalty to their represented manufacturer is suspect at times
7. Energy project work takes too long for them....too complicated / not a core competency
8. Reactive rather than proactive – guided by activities of others
9. Loss of accountability – too many lines
10. Debate goes on – manufacturer suspicion.....salaried sales force vs. independent rep

TRADITIONAL ELECTRICAL / LIGHTING DISTRIBUTION - The Electrical Industry traditionally sells its products to and through various channels of distribution. In the Commercial / Industrial market segment, the primary channel of distribution is the Traditional Electrical / Lighting Distributor. History has shown that this relationship between the electrical manufacturer and the electrical distributor has in essence developed a formidable industry, making its products readily available. Can you identify with any of these weaknesses?

1. All distributors are alike.....customers’ perception
2. Short-term sales focus.....satisfy demand vs create demand
3. Commodity orientation.....reactive vs. proactive
4. Lack of innovation
5. Stuck in old business models
6. Victims of *tyranny of the urgent*
7. Not up to technical / technology challenges.....training, selling. marketing
8. Not capable of pivoting from product distribution to providing services / solutions
9. Poor “new product” sales history – rather stock and sell existing products
10. Geographical constraints.....local focus even for the national distributor chains
11. Do not have a compelling knowledge of the energy market segment
12. Not fully developed sales skills to sell the benefits of energy efficient products
13. Limited value-added energy services.....added cost with little added value
14. Not providing the needed link for the manufacturer in the energy market segment

ESCO CHANNELS OF DISTRIBUTION - The ESCO channel of distribution has emerged and grown over the last 30 years as any new channel of distribution does to fill a vacuum..... But they have weaknesses too:

1. New business development difficulties – image building / cold calling
2. Customer relations – trust / comfort level in early stages of the sale
3. People – quantity and quality
4. Infrastructure still in the development stage
5. Product knowledge evolving - new in the lighting game
6. Sales and marketing skills still developing in lighting
7. Cash flow problems – credit issues
8. ESCO consolidation and fall out
9. Utilities consolidating and unbundling.....restructuring
10. Somewhat dependent on rebate programs

Traditional Distribution has learned over its long history that existing channels must evolve and serve the new needs of their customers. End-User customers in the final analysis determine with whom they chose to do business and continue to switch away from ineffective channels of distribution. Are your customers making the switch??????

LED Issues to Watch...

1. *Cruise Ship Operator Cuts Energy by More Than Half with Major LED Upgrade -*

Holiday cruise company Costa Cruises has installed 300,000 LED luminaires in its cruise ships to cut CO₂ emissions and reduce energy consumption by 60 per cent. Switching from 50W bulbs to 7W LED technology increases energy efficiency by more than halving each ship's electricity consumption required for lighting. Philips carried out the relamping of the first three ships in 2013, with the remaining seven completed by December 2014. Philips' MasterLED spotlights and CoreProLED tubes were specified to provide a 'bright, warm and inviting' ambience.

<http://www.luxreview.com>



- ### **2. *The Internet of Things Is Lighting's Chance to Take Things Up a Gear -*** "In the future you will only need one type of sensor module as the input for your fire alarm, security system, HVAC and lighting control" The latest technological change on everyone's minds is the internet of things (IoT), a world where just about everything is connected to the internet. Many people are still struggling with this concept.... Don't worry about this – imagine a world in which all of a building's subsystems can talk to each other along a unified protocol, and integrate together in a seamless intuitive interface, reacting to the needs of users with minimal effort. But how do you get this stuff into buildings? If only there were a network that already covered the whole of a building... maybe one that people were already looking at upgrading in order to make energy savings, providing an opportunity to add new technology... Wait a minute... There we have it: lighting's role mapped out as the essential element in the IoT <http://www.luxreview.com/article/the-internet-of-things-lighting-s-chance-to-take-things-up-a-gear>

- ### **3. *Lighting Applications for Mobile Devices -*** See the complete list at: <http://www.lightsearch.com/resources/mobileapps/index.html>

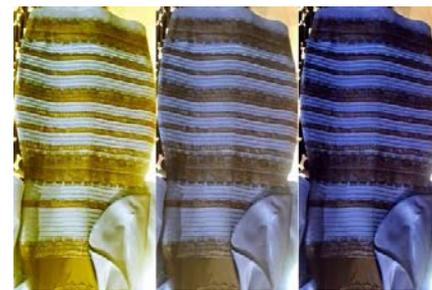
4. ***The Dress: a Lesson in Lighting, Says US Energy Secretary -***

@ernestmoniz "My take on The Dress: ✓□ It's brown & blue ✓□

Good lighting is everything" <http://energy.gov/eere/ssl/rd-program>

Secretary Moniz grabbed onto the garment to promote LEDs. Some of the better explanations that I've seen boil down to this: the human brain knows whether an object is bathed in a lot of bright light, obscured in

relative dark, or whether the light that's hitting it is somewhere in between. The amount of light that falls on an object can distort its color appearance. Like an automatic camera, the brain constantly adjusts to minimize these distortions. The blue and black or white and gold Dress happens to stand in a mix of bright backlight and dark front shadow. Some brains overcompensate. Watch the video: <http://www.luxreview.com/article/the-dress-a-lesson-in-lighting-says-us-energy-secretary>



5. ***Internet of Everything by Chuck Ross*** - Our houses—or, at least, the houses of the tech-savviest among us—are getting closer to running autonomously. Now, it's not just that you can open your garage door or turn on your living room lights from a smartphone app. Today, many home devices actually are beginning to communicate with each other. Lock the door on your way out and your thermostat shuts off. Or, if you come home and open the garage door, the kitchen lights turn on and the clothes dryer turns up its heat to dewrinkle the clothes that you left in there. Welcome to the brave new world of the Internet of Things (IoT). <http://www.ecmag.com/section/systems/internet-everything>

6. ***A Different Kind of Bug Lamp*** - Lighting Science Group, Melbourne, FA, and Intellectual Ventures' Global Good, Bellevue, WA, announced a research agreement to collaborate on the development of next-generation light technologies for pest control. Based on Global Good's photonic fence invention and Lighting Science's light-control technology, the joint development effort will focus on field-ready prototypes that offer an environmentally-responsible alternative to chemical pesticides. <http://electricalmarketing.com>

7. ***Two Phase II SBIR-STTR Proposals Selected for Award Support SSL OLED Technology*** - The U.S. DOE Office of Science has selected for award two Small Business Innovation Research (SBIR)-Small Business Technology Transfer (STTR) Phase II proposals targeting important advancements in OLED technology for solid-state lighting applications:

- MicroContinuum, Inc: R2R Production of Low-Cost Integrated OLED Substrate with Improved Transparent Conductor & Enhanced Light Outcoupling
- Pixelligent Technologies LLC: Advanced Light Extraction Material for OLED Lighting

To learn more about this program, visit <http://science.energy.gov/sbir/>

8. ***DOE on LED Lamps Sold at Retail Stores*** - Two recent DOE [CALiPER](#) reports add key insights to our knowledge of how those lamps perform. The reports follow on the heels of CALiPER [Retail Lamps Study 3](#), which was released last year and showed that LED lamps have quickly improved.

- [Retail Lamps Study 3.1](#) focuses on the dimming, power quality, and flicker characteristics of a subset of 14 LED A lamps
- [Retail Lamps Study 3.2](#) focuses on lumen depreciation and color shift in a subset of 15 LED A lamps. The lamps were monitored in an automated long-term test apparatus for more than 7,500 hours.

For more details on these instructive studies as well as others on LED retail lamps, see the full reports, which are available on the [DOE website](#)



9. **LFI CONTROLS & CONNECTIVITY FORUM - Only at LIGHTFAIR International in NYC this year!** Controlling light for the visual and non-visual experience places new demands on design practice and technology applications. LFI's new Controls and Connectivity Forum creates a dialogue for these emerging challenges. Top thought-leaders and practitioners from across the lighting and design community will share current and near-future research presentations and cutting-edge case studies. This educational experience on **Wednesday, May 6** includes five 90-minute seminars led by subject matter experts. <http://www.lightfair.com/lightfair/V40/>
10. **Lights That Track Where You Are** - You arrive at the supermarket in a hurry with a list of things to buy. You have your shopping list saved in an app on your phone. It immediately generates a map showing you the quickest route around the store to pick up everything you need. It guides you around the aisles with a moving arrow on a map. All of this is now possible, all thanks to LED lights. The technology is called visible light communication (VLC) and it works by encoding data programmed into the light driver from normal LED luminaires. Who is working with VLC:
- ☀ Point your phone at an item lit by **Fujitsu's** spotlight and the camera reads data in the reflected light to provide you with information about the item.
 - ☀ **Philips Lighting** is trialing a positioning system at a museum in the Netherlands and hopes to apply the technology to retail applications too.
 - ☀ **EldoLED** (parent company Acuity Brands) has been running a large-scale trial of its positioning system with a US retailer, and is working on live installations for two retail clients.
 - ☀ A test installation at Green Apple Books in San Francisco features luminaires with **Bridgelux** Decor Series LED modules and built-in Bluetooth.
 - ☀ **Bytelight** is working on other trials that combine Bluetooth with VLC.
 - ☀ **GE Lighting** has two trials of positioning systems underway with retailers in Europe, and two more in the US. <http://www.luxreview.com/article/lights-that-track-where-you-are>
11. **Philips Hints at Plans for Divestiture of Lighting Unit, Lumileds Deal is Near** - In advance of its annual general meeting that will take place on May 7, 2015, Royal Philips has said that Philips Lighting will likely be divested via a limited initial public offering (IPO) of shares next year. The sale of the combined [Lumileds](http://www.ledsmagazine.com/articles/2015/03/philips-hints-at-plans-for-divestiture-of-lighting-unit-lumileds-deal-is-near.html) LED and automotive lighting businesses could happen in weeks and Philips is also entertaining offers for the OLED lighting business. Interested parties are: private equity firms CVC and KKR, Bain Capital and a Chinese consortium that might include Lattice Power. <http://www.ledsmagazine.com/articles/2015/03/philips-hints-at-plans-for-divestiture-of-lighting-unit-lumileds-deal-is-near.html>
12. **NEMA Publishes ANSI C136.16-2014** - American National Standard for Roadway and Area Lighting Equipment—Enclosed, Post Top-mounted Luminaires. This standard is useful to roadway and area lighting manufacturers, municipalities, utilities; and provides requirements to allow for the interchangeability of enclosed, post top-mounted luminaires. It covers dimensional, maintenance, and light distribution features that permit the interchange of enclosed, post top-mounted high-intensity discharge lamps, solid-state light sources (i.e., LEDs), CFLs, and induction luminaires whose center of mass is approximately over the mounting tenon. www.nema.org

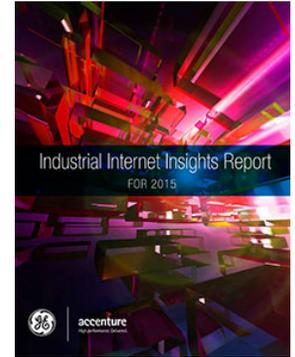




- 13. Turin Follows Milan in Going LED** - The Italian city of Turin is turning 55 per cent of its public lighting to LED. Turin follows Milan in choosing to introduce LED luminaires from Italian manufacturer AEC, and hopes to achieve 'significant cost reductions and energy savings'. AEC won a tender with Turin's electricity supplier Iren Servizi e Innovazione to supply 45,000 of its Italo LED luminaires. The deal with Turin follows the rollout of 85,000 luminaires in Milan. <http://www.luxreview.com/article/turin-follows-milan-in-going-led>
- 14. Europe's Plan to Make the 'Humble' Lamppost a Bit Less Humble** - Outdoor lighting giants Philips and Schröder are joining a group of companies and cities from across Europe to kickstart the market for 'smart' streetlights. Smart lighting technology – with sensing and communication capabilities built in like Wi-Fi, air quality monitoring, parking, traffic sensing, etc. – is still young and not widely understood. So around 25 organizations representing potential buyers, sellers and makers of the technology have committed to playing their part in establishing the market. The aim is to get 10 million smart lights on to Europe's streets by 2017. The 'market making' project, nicknamed [The Humble Lamppost](http://www.luxreview.com), is part of the European Innovation Partnership on smart cities, set up by the European Commission. <http://www.luxreview.com>
- 15. LEDinside Estimates 2015 LED Industrial Lighting Market to Reach \$2.37 B** - And by 2018 the scale will reach \$3.935 billion. LED high and low bay lighting fixtures have become more attractive for industrial lighting users for replacement purposes. Furthermore, LED lighting products have seen additional increases in performance and decreases in price. These improvements, together with industrial lighting products' high profit margins, have made industrial application the most competitive market for LED package and LED luminaire companies for the 2015-2016 period. LED high/low bay lighting products are the largest in terms of market share. It is expected 80W-250W LED high/low bay light products will become mainstream in the market. <http://www.ledinside.com>
- 16. Philips Gives Workers Smartphone Control of Office Lighting with Connected Lighting System** - A 45+ worker tends to need almost double the light needed by a 20 year old for everyday tasks. New technology from Philips allows office workers to personalize their lighting. The Philips system allows office workers to control the lighting in open plan offices as well as temperature in meeting rooms, to suit their individual preferences. Their smartphones will detect their location from overhead lighting fixtures via an app. The system uses Power-over-Ethernet (PoE) to connect office lighting fixtures to a building's IT network. The lighting system acts as an information pathway, enabling workers to control and access other building services via their smartphones, allowing them to enjoy greater visual comfort and productivity. <http://www.newscenter.philips.com>
- 17. Acuity to be a Sensity NetSense Partner** - Acuity Brands and Sensity plan to create a joint solution that further transforms energy-efficient LED lighting into a smart, connected platform for the Industrial Internet of Things (IoT). As a Sensity NetSense Partner, Acuity Brands further expands its industry-leading smart outdoor lighting solutions capabilities by adding the ability to capture and transmit data near real-time, providing actionable insight and enabling a broad array of applications and services. The smart lighting solutions targeted to cities, commercial and retail buildings, airports and universities will focus on improving energy conservation, public services, safety and security, parking, and a wide variety of other applications. <http://www.sensity.com/acuity-sensitypartnership>



18. *The Industrial Internet: Changing the Competitive Landscape* - How big is the economic power of the Industrial Internet? Consider one analysis that places a conservative estimate of worldwide spending at \$500 billion by 2020. The Industrial Internet—the combination of Big Data analytics with the Internet of Things is producing huge opportunities for companies in all industries. According to new research from GE and Accenture, executives across the Industrial and Healthcare sectors see the enormous opportunities of the Industrial Internet and in many cases are deploying the first generation of solutions. The vast majority believe that Big Data analytics has the power to dramatically alter the competitive landscape of industries within just the next year and are investing accordingly. Download the whitepaper: <https://www.gesoftware.com/sites/default/files/industrial-internet-insights-report.pdf>



19. *Daintree Networks Partners with CLTC to Advance Lighting Controls* - [Daintree Networks](#), a provider of open wireless smart building solutions for enterprise control and energy management, recently announced its affiliate partnership with UC Davis’ [California Lighting Technology Center \(CLTC\)](#) with the goal of advancing lighting controls.

20. *SSL Industry Waits for the Right IoT Standards and Wireless Protocols* - Whether dealing with new construction or retrofitting existing buildings with energy-efficient LEDs, deploying advanced sensors with every light fixture gives organizations the ability to capture vast amounts of data and gain deep insights into their workspaces. The energy savings from such systems more than justifies their installation costs, while the insights they produce create an environment responsive to each occupant and create new real estate opportunities. Such systems require wireless networks to connect all the sensors; yet, to date, no single wireless standard exists that adequately supports the rapidly evolving needs of data-intensive enterprise IoT applications such as advanced lighting controls. <http://www.ledsmagazine.com>

21. *High Rebates for High Bay Fixtures* - Whether replacing antiquated T12HO systems or inefficient HID systems, installing fluorescent, pulse start metal halide LED or induction high bay fixtures can save on energy costs, provide better light levels and also bring in high rebates. Here is a snapshot of the current high-bay fixture rebates. <http://www.briteswitch.com/news/06113.html>

Prescriptive Rebates for High Bay Upgrades

Type of Fixture	Minimum Rebate	Average Rebate	Maximum Rebate
High bay T8	\$10.00	\$65.96	\$325.00
High bay T5HO	\$15.00	\$76.24	\$325.00
LED	\$19.00	\$89.00	\$225.00
Induction	\$10.00	\$84.50	\$400.00
Pulse Start Metal Halide	\$45.00	\$46.50	\$400.00

22. *2014 IES Progress Report is Available* - The Progress Committee’s mission is to keep in touch with developments in the art and science of lighting throughout the world and prepare a yearly report of achievements for the Society. Acceptance in the Progress Report is based on an impartial judging process used by the committee to evaluate each submission on its uniqueness, innovation and significance to the lighting industry. There were 265 submittals in 2014; 169 were accepted into the report. <http://www.ies.org/pdf/progressreport/IES%20Progress%20Report%202014.pdf>



LED Technologies to Watch...

23. *Electrical Wholesaling's Top 5 LED Picks for March 2015 -*



- 1) LED Light Engines - **Soraa** recently launched a small, low profile series of light engines that provide fixture manufacturers access to the company's full visible spectrum GaN-on-GaN LED technology.
- 2) LED Retrofit Downlights - Built with **Cree TrueWhite Technology**, the DR4 and DR6 retrofit downlights consume up to 81% less energy than traditional incandescent and halogen sources while achieving better color quality with a CRI of 90+.
- 3) Surface-Mount LED Fixture - Incorporating patented **WaveStream LED optical technology**, the Portfolio Surface-Mount light-emitting diode (LED) Luminaire from Eaton's Cooper Lighting Division provides uniform, glare-free illumination for standard and high ceiling applications in retail, commercial and architectural spaces.
- 4) Commercial 16W PAR38 LED - The **Commercial 16W PAR38** is designed for ambient and accent lighting in track light and recessed downlight applications.
- 5) Recessed LED Lensed Luminaires - **LaMar Lighting Co.'s R1L/R2L Series** of recessed LED lensed luminaires deliver volumetric lighting and glare control.
<http://ewweb.com/gallery/electrical-wholesalings-top-5-led-picks-march-2015>

24. *LaMar Lighting Introduces R1L/R2L Series LED Troffers -*

Suited for recessed commercial lighting, the R1L/R2L Series of premium recessed LED lensed luminaires delivers high-quality volumetric lighting and superior glare control. The contemporary style and ability to provide even illumination without dark areas common with traditional troffers make them ideal for recessed commercial applications including office, education, healthcare and retail. LaMar Lighting designed a custom ribbed frosted acrylic diffuser for uniform light distribution and luminous appearance without LED hot spots. Aluminum reflectors are finished in a custom white matte finish with a 91% reflectivity for a clean, low-glare appearance. The result is a balanced illumination throughout the entire interior. www.lamarlighting.com



25. *Dialight's Vigilant H2 Series LED High-Bay Luminaire -*

Delivers 140 lm/W for approximately 25,000-lm output. Featuring the company's reflector technology and a tempered glass lens, the luminaire is IP66-rated to operate in ambient temperatures ranging from -40°C to +65°C. In addition, the product weighs only 18 lb, is UL1598A certified and CE compliant, and is suitable for 120V to 277V and 347V to 480V applications. The Vigilant H2 Series delivers 140 lm/W for approximately 25,000-lm output. Featuring the company's reflector technology and a tempered glass lens, the luminaire is IP66-rated to operate in ambient temperatures ranging from -40°C to +65°C. In addition, the product weighs only 18 lb, is UL1598A certified and CE compliant, and is suitable for 120V to 277V and 347V to 480V applications. <http://www.dialight.com/>



26. The Sigma ICE LED High Bay - Designed to replace a 250w or 400w Metal Halide, HID, High Pressure Sodium or equivalent light source on a 1-for-1 basis. It delivers crisp, white, HD quality light from a fixture that weighs just over 4 lbs. Installation is quick and simple - simply remove your old fixture from it's hanging element and replace it with the Sigma ICE LED High Bay. We have lower wattage options for low bay lighting as well. An integrated hook and an IP66 rating make this our most versatile fixture yet.

<http://sigmaluminous.com>



27. Civilight North America Offers 11 New ENERGY STAR Qualified LED Lamps - Offered in three series, Architectural, Professional and Commercial, Civilight's LED lamps push the boundaries of CRI and R9, while maintaining the efficacy and lifetime required for ENERGY STAR certification.

- [Architectural 19-watt PAR38](#)
- [Commercial 16-watt PAR38](#)
- [Professional 19-watt PAR38](#)
- [Architectural 14-watt PAR30L](#)
- [Architectural 6-watt Clear B11](#)
- [Architectural 10-watt HALED MR16](#)

Civilight anticipates that 12 additional models will be included on the ENERGY STAR qualified products list in spring/summer 2015. <http://www.civilight-na.com>

28. GE's Lighting-Based Indoor Positioning Solution - Indoor location technology embedded inside GE [LED lighting fixtures](#) will deliver high-value applications to retailers, providing the ability to understand the precise location of shoppers using an opt-in application on their smartphones and tablets. The solution combines Visible Light Communication (VLC), Bluetooth Low Energy (BLE) and inertial device sensors, and supports any Android or iOS application on a smart device equipped with a camera and/or [Bluetooth® Smart technology](#). The comprehensive approach enables retailers to reach a broad number of shoppers across the largest area—from the parking lot to anywhere in the store there is LED light. This video shows how GE Lighting is communicating with shoppers' smart devices through the next generation of LED lighting fixtures, enabling retailers to provide exciting new location-based services. <https://www.youtube.com/watch?v=Ozi1gxSeprk>



29. Eaton's Cooper Lighting Linear LED Luminaire - The Corelite RZL LED Suspended Luminaire provides direct/indirect illumination in open-ceiling environments. This versatile luminaire features a refined, industrial style with a choice of five different shielding variations to fit different architectural styles and preferences. The highly advanced LED technology provides beautiful, crisp white light with high color accuracy and uniformity. Five light level options ranging from nominal 3,000 lumens (30 watts) to over 8,000 lumens (84 watts) provide the flexibility to satisfy exact requirements for different mounting heights and spacings. The product can be suspended by aircraft cables or with a rigid pendant or can be surface mounted. www.eaton.com



30. Finelite LED Luminaires - Finelite manufactures LED luminaires that achieve the promise of LED technology – long life and low energy consumption. While we spent many years perfecting our technology, the solution is fairly straight-forward: Running high-quality, mid-power LEDs and LED drivers at low temperatures enables these components to last well in excess of ten years. Using quality lens materials, sheet steel, extruded and cast aluminum and robust powder coatings, we manufacture LED luminaires that will stand the test of time. <http://www.fineliteled.com/products/led.html>



31. Switchmate Develops a Technology That Will Turn Your Dumb Old Incandescent Lights into Smart Ones - Switchmate's <http://www.myswitchmate.com/> plastic cover snaps over a conventional light switch and adds Bluetooth connectivity to it. Fire up an app on your smartphone, and suddenly you can usher your brainless incandescent bulbs into the modern digital era. All without the purchase of any fancy, expensive, genius LEDs. Switchmate, doesn't provide all the smartness of a fully kitted out smart LED but it does allow users to turn lights on and off from the sofa or to turn the lights on inside just as they approach home. It also serves as a timer, eliminating the need for those clunky mechanical wall socket gadgets. So if you're going away and you want to deter the burglars, or if you want to assure that a light greets you in the evening, Switchmate can do that. Watch the video: www.youtube.com/watch?v=A8OcOqG4aSw



32. Lumentek Global Introduces a “Universal” LED T8 Tube Replacement That Is “Ballast Friendly” or “Direct Wire” - A new LED replacement tube for T8 & T12 fluorescent lamps will change all that has been written to date. Lumentek Global (an American company) manufactures a DLC certified LED T8 tube that works with a ballast (ballast friendly) or without a ballast (direct wire). Their advanced circuitry allows the LED tube to operate on most instant start, rapid start, and program rapid start electronic and magnetic ballasts. Thus, Lumentek’s “ballast friendly”™ LED product is a true “universal” replacement tube that’s as easy to install as a light bulb without the concern for future ballast replacements. <http://www.lumentekglobal.com/t8ballastcompatibleledtubes/>



33. Cree RUL Series Rural Utility - From rural street lighting to storage facilities, the RUL Series outperforms incumbent technology by providing superior illumination and economic performance for municipalities and utilities resulting in expedient payback with less than half the wattage of comparable traditional solutions. The first of Cree’s innovative outdoor LED luminaires to address the estimated 10 to 13 million rural street and area light fixtures installed, the new RUL Series delivers a better, more affordable lighting experience for residential roadways, security, storage and loading areas with game-changing efficacy, rapid payback of less than one year and Cree’s industry-leading 10-year warranty. <http://www.cree.com/lighting/RULseries>

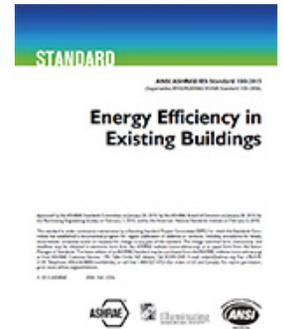


National Energy Issues to Watch...

- 34. DOE Issues New Fluorescent Lamp Regulations** - The U.S. Department of Energy (DOE) has issued new energy standards for general-service fluorescent lamps that are expected to reduce availability of standard 4-ft. linear and 2-ft. U-bend 32W T8 lamps as well as some reduced-wattage T8 lamps. The rules go into effect January 26, 2018. After that date, distributors may continue to sell their inventories of non-compliant lamps until these are exhausted. DOE's 2010 National Lighting Inventory estimated that 20% of all lamps in the commercial building sector and 44% in the industrial sector are 4-ft. T8. In 2010, DOE estimated that there were 532 million 4-ft. linear T8 lamps and 14 million T8 U-bend lamps installed in commercial and industrial buildings in the United States. <http://lightingcontrolsassociation.org/doe-issues-new-fluorescent-lamp-regulations/>
- 35. High Color Rendering Can Enable Better Vision without Requiring More Power** - An article advocating for high color rendering in consumer lighting products and the policies that support their adoption is now available. The paper is a collaboration between CLTC <http://cltc.ucdavis.edu> the University of British Columbia and the National Research Council of Canada. The article focuses on the tradeoff between color rendering accuracy and lamp efficiency to show that high color rendering accuracy is appropriate and, contrary to a common misconception, does not intrinsically require greater electrical energy consumption. The article appears in the IES LEUKOS: "[High Color Rendering Can Enable Better Vision without Requiring More Power](#)"
- 36. IES Publishes Two New Outdoor Lighting Standards** - The Illuminating Engineering Society of North America (IES) has published two new recommended-practice standards for outdoor lighting that are of relevance to SSL because of its growing dominance in outdoor lighting applications:
- IES RP-20-14 ("Lighting for Parking Facilities") is intended to optimize pedestrian and vehicle safety as well as energy conservation, and also addresses light trespass.
 - IES RP-33-14 ("Lighting for Exterior Environments") focuses on such issues as light trespass and sky glow and is intended to help lighting designers and specifiers determine the proper lighting zone specifications for particular applications.
- Electronic copies may be purchased online through the [IES store](#)
- 37. Smart Homes Market Worth \$58.68 Billion by 2020** - The global smart homes market was valued at \$20.38 billion in 2014 and is expected to reach \$58.68 billion by 2020. North America will lead the chart driven by gaining traction for safety, peace of mind, increased awareness and better product offerings. The benefits of smart homes can only be realized if the technology becomes affordable for common people and accessible to those for whom it is essential. Smart homes refer to a residence equipped with computing and information technology devices that anticipate and respond to the needs of the residents; thus, working towards enhancing their comfort, convenience, security, and entertainment through the automation of technology within a home. <http://www.tedmag.com>
- 38. NEMA Publishes ANSI C136.14-2014 - American National Standard for Roadway and Area Lighting Equipment—Elliptically Shaped, Enclosed Side-mounted Luminaires.** This standard covers dimensional, maintenance, and light distribution features that permit the interchange of enclosed, side-mounted luminaires for horizontal-burning HID lamps and other light sources used in roadway and area lighting equipment. This type of luminaire has traditionally been used for street or roadway lighting, and has commonly been referred to as "cobrahead" style luminaires. www.nema.org



39. ASHRAE/IES Publish Updated Standard on Energy Efficiency in Existing Buildings - A newly revised standard from ASHRAE and IES seeks to provide greater guidance and a more comprehensive approach to retrofit of existing buildings for increased energy efficiency. ANSI/ASHRAE/IES Standard 100-2015 provides comprehensive and detailed descriptions of the processes and procedures for the retrofit of existing residential and commercial buildings in order to achieve greater measured energy efficiency. Appendices are included for life-cycle cost analysis procedures as well as identification of potential energy conservation measures. <http://www.techstreet.com/ashrae/products/1891323>



40. The Rosen Law Firm Announces Investigation of Potential Securities Fraud Claims against TCPI - The Rosen Law Firm, P.A., a global investor rights firm, announces it is investigating potential civil securities claims against TCP International Holdings Ltd. (NYSE:TCPI) resulting from allegations that the Company may have issued materially inaccurate statements about the Company's true financial condition and prospects. On February 27, 2015, TCP announced that claims were filed in an Ohio court by a Company executive asserting corporate misconduct by the Company and its CEO Ellis Yan. This adverse news caused to Company's stock to fall over 50% in intraday trading on February 27, 2015. The Rosen Law Firm is preparing a securities class action lawsuit on behalf of TCP International investors. 2/27 BUSINESSWIRE

41. EIA's New Excel Data Add-In Tool for Windows - The U.S. Energy Information Administration (EIA) released a new tool today that combines energy and economic data with the functionalities of Microsoft Excel. <http://www.eia.gov/beta/api/excel/?scr=email> EIA's free Excel data add-in tool for Windows combines EIA's energy data and economic data from the Federal Reserve Bank of St. Louis with the analytic capabilities of Microsoft Excel. Using this tool, Excel workbooks can be saved and opened weeks or even months later, and the data you previously selected can be updated with a single mouse click.

42. NEMA Urges Senate Action on Energy Savings and Industrial Competitiveness Act - Senators Rob Portman (R-OH) and Jeanne Shaheen (D-NH) reintroduced the legislation, first introduced in 2011, to stimulate greater energy efficiency across the U.S. economy. According to the Energy Information Agency, the combined annual energy costs for U.S. commercial buildings and industrial facilities total \$202.3 billion, and more than 30 percent of the building's energy use is inefficient. A modest ten percent improvement in efficiency would save \$20 billion annually <http://www.nema.org>

City & State Energy Issues to Watch...

43. Top 10 States for Solar Installation in 2014 - Solar capacity installation grew in 2014, and 10 states took the lead on new installation. The states are ranked on the number of megawatts (MW) installed per state and number of houses powered per megawatt of solar added, according to the Solar Industry Energy Association (SEIA).

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|-------------------|---------------|-----------------|
| 1) California | 5) Arizona | 9) Hawaii |
| 2) North Carolina | 6) New Jersey | 10) New Mexico. |
| 3) Nevada | 7) New York | |
| 4) Massachusetts | 8) Texas | |

<http://www.fierceenergy.com/story/top-10-states-solar-installation-2014/2015-03-12>



- 44. Syracuse Housing Authority Partners with Ameresco** - It is expected to bring nearly \$5 million in capital to a number of the agency's apartment complexes. Under an Energy Performance Contract (EPC) financed using savings from SHA's utility operating funding, new LED site lighting, attic and wall insulation, water conservation measures, temperature controls and other improvements will be installed. The U.S. Department of Housing and Urban Development (HUD) provides incentives for efficiency improvements. 3/13 AP
- 45. Georgia Power Illuminates Savings on ENERGY STAR® Certified CFLs and LEDs** - Georgia Power www.GeorgiaPower.com announced today a series of special offers on ENERGY STAR® certified CFL and LED lighting at participating retailers statewide. No coupons or rebate forms are needed to reap the savings on high-tech, high-efficiency lighting options - just look for the Georgia Power tag in-store to save instantly at the register. Offers are good while quantities last, with a limit of 16 bulbs per customer. 3/19 AP
- 46. CUB Report: Efficiency Overtakes Electricity Competition as Most Reliable Way to Cut Power Bills** - Citizens Utility Board (CUB), which gives homes customized money-saving plans, is among the most accessible of Illinois efficiency programs—it's free and all customers can use it regardless of their power supplier. The free service, managed by CUB and the software firm C3, based in Redwood City, CA, features simple actions for homes on modest budgets, including installing efficient lighting and unplugging kitchen appliances. To join, customers can take your ComEd bill, visit www.CUBEnergySaver.com hit "Register Now," and follow the instructions to link to their ComEd account. 3/03 PR Newswire
- 47. DTE to Upgrade Port Huron, MI Street Lights** - Port Huron is next on the list for DTE Energy's \$4 million street lighting improvement project. Scott Simons, DTE spokesman, said the lights will be upgraded from mercury vapor to LED. The change is estimated to save the city about 30 percent in energy cost. DTE Energy will upgrade the older street lights that are energized by "series circuits." The new lights will operate on a different system, so if one light has a problem, it won't affect other lights operating on the same system. 3/16 MarketLine
- 48. City of Arlington to Save \$14MM through Landmark Energy Program Featuring LED Streetlights** - The Arlington, TX project www.arlingtontx.gov will upgrade energy efficiency performance across 22 City sites, including Ott Cribbs Public Safety Center and the Elzie Odom Recreation Center. In addition to these infrastructure changes, the City is excited to be the first major city in the southwest to retrofit 10,500 old HPS streetlights with new high performing LED fixtures. OpTerra Energy Services will guarantee the annual energy savings. 3/12 PR Newswire
- 49. Desert Sands USD completes largest Prop. 39 Energy Project in California** - From \$6.4MM in Prop. 39 Funds to \$19.5MM in long-term energy savings, Desert Sands partnered with OpTerra Energy Services to deliver energy efficiency upgrades across campuses on an aggressive timeline. The following energy efficient and renewable energy upgrades are transforming the quality of both building performance and comfort for over thousands of students every day:
- ☀ Over 6,700 new LED classroom lighting fixtures across 5 sites
 - ☀ New solar shade parking canopy at Palm Desert High School
 - ☀ 153 new HVAC units at La Quinta High School 3/11 AP

Monthly Special Feature...

The Eight Biggest Trends in Retail Lighting by Robert Bain -

Building brands, driving sales, controlling costs, and preserving the all-important 'look and feel' ... who said retail lighting was easy? Here are the eight biggest trends influencing retail lighting in 2015. <http://www.luxreview.com/article/the-eight-biggest-trends-in-retail-lighting>



1. Energy-saving LED retrofits - Retail was one of the first sectors to start dabbling in LED lighting, because of the big energy savings that can be made by replacing electricity-guzzling halogen spotlights. Major retailers are announcing big new rollouts nearly every day: Sainsbury's, Tesco, Next, Walmart... but it's still a small minority of stores that have switched to the new technology, and it's mainly the bigger chains with significant resources and economies of scale behind them. In time, though, it seems inevitable that LED will be everywhere. **OUTLOOK:** Loads of shops have already gone LED but there are plenty left – especially the smaller ones.

2. Branding with light - With stiff competition from online shopping, bricks-and-mortar retailers are having to reinvent their stores as a place where consumers can experience the brands and the product. And they're learning to use light as one of the most effective ways to become distinctive and recognizable – each in their own way. From Hollister to Primark, light is becoming part of what makes brands what they are. **OUTLOOK:** This is a trend the lighting business is well placed to cash in on.

3. New color technology - Color has always been key in retail lighting. Many buyers still assume that going LED means compromising on color quality; but if you avoid the cheap rubbish, it doesn't have to be so. Halogen has long been the benchmark for color quality, but in fact many LED products are now outperforming halogen and the latest color technologies use specially tuned light to keep whites clean while making certain colors even more vivid (see page 38). **OUTLOOK:** LED spent a long time proving its adequacy. Get set for it to start fulfilling its real potential.

4. Lights that do new things - What if lights could guide you around a shop and send you special offers when you're looking at particular items? Well, now they can, thanks to super-accurate positioning systems powered by LED lights (see page 95). It's done by modulating light in a way the human eye can't see, but that can be picked up by the cameras in shoppers' mobile phones. The light from each luminaire carries a unique code, which the phone uses to pinpoint its position. EldoLED is already installing its Lux Award-winning positioning system at retail sites in the US, GE has several trials under way at retail sites in the US and Europe, and Philips is trialing its system at a museum in the Netherlands. **OUTLOOK:** We've yet to see it in a real-life retail application, but we're very excited about it.

5. The flight to quality - We've all seen heartbreaking examples of poor-quality LEDs in retail. A well-meaning store manager has tried to save money on energy and maintenance, and now the shop is dim, all the clothes look washed out and the customers feel like zombies. Those days are coming to an end: the wild west of the LED market is being tamed, and even those buyers who had their fingers burned (literally or figuratively) in the early days are trying again, with a renewed focus on look and feel. **OUTLOOK:** Some skepticism remains, but LED is winning new friends daily.

6. Overcoming the fear - Retailers can't afford to get the look and feel wrong, so LED rollouts tend to be nerve-wracking. There is always a certain risk when you invest in new technology. And with no real standards for LED lighting products, we might just have to embrace that risk. With warranties, funding and improved quality, it's getting easier, but there's still inertia – partly the result of bad experiences, uncertainty or mistrust over exaggerated energy-saving and lifetime claims made by manufacturers. **OUTLOOK:** Lighting refits are never simple, but more and more people are at it, giving buyers confidence – and it's getting easier by the day.

7. Justifying the spend - It's easy enough to prove the environmental benefits of an LED upgrade, but sadly that's not always enough to persuade the finance department to approve the upfront expenses associated with a new lighting scheme. Imagine how much easier it would be if you could prove the correlation between better lighting and increased sales. Unfortunately, it's not that easy to separate the lighting from the myriad of other variables that influence people's shopping decisions (see page 44). As Simon Waldron, Sainsbury's electrical engineering manager, told Lux: 'The controllability of variables is missing. We need a standardized approach to proving the link between lighting and sales which at the moment can't be applied.' **OUTLOOK:** Don't hold your breath for a concrete link between lighting and improved sales... but that won't stop people looking.

8. Clients are smartening up - Manufacturers have tried to fight LED skepticism with product warranties. But the terms are usually written to protect them just as much as their clients – defining and limiting what they have to do if something goes wrong. In a lot of cases, what a warranty promises doesn't go very far to resolving a client's immediate problems. If your lighting installation doesn't work, it's not much help to ship them all back to China and wait for new ones. So clients are pushing for their own warranty terms. Like Sainsbury's, which told manufacturers supplying kit for its ongoing LED rollout what their warranties had to say. **OUTLOOK:** As trust and quality improve, and the market becomes accustomed to longer-lasting products, this issue may fade. But for now, manufacturers should expect to be kept on their toes.