

NATIONAL ENERGY ISSUES TO WATCH:

- 1. A Phone App for Switching Out Your Light Bulbs** - According to Eco Hatchery, a software company based in Wisconsin, the Light Bulb Finder application for iPhones and Android handsets won the "best overall" prize in the Environmental Protection Agency's Apps for the Environment Challenge. The Light Bulb Finder uses E.P.A. data on energy-saving light bulbs to help consumers make the switch to more efficient incandescent bulbs. Enter your ZIP code, and the app will calculate your savings based on local electric rates. You choose the bulb style and the quality of light you prefer, add the items to your shopping cart, and then order bulbs directly from your smartphone. The app is free for downloading, <http://www.lightbulbfinder.net/>
- 2. Department of Energy Recognizes ASHRAE 90.1-2010 as New National Energy Standard** - In a bold move, on October 19, 2011.. By October 18, 2013, all states in the United States must put in place a commercial building energy code at least as stringent as the ASHRAE/IES 90.1-2010 energy standard, according to an October 19, 2011 Department of Energy (DOE) ruling. This means the 2007 standard is effectively being leapfrogged as the national energy standard. <http://www.energycodes.gov/states/maps/commercialStatus.stm>
- 3. Funding Opportunity Announcements** - <https://eere-exchange.energy.gov/>
 - **Solid-State Lighting Manufacturing Research and Development - Round 3** The objective of this Funding Opportunity Announcement (FOA) is achieve cost reduction of solid-state lighting for general illumination through improvements in manufacturing equipment, processes, or techniques.
 - **Solid-State Lighting Core Technologies - Round 8** The goal of this Funding Opportunity Announcement (FOA) is to focus on applied research for technology development, with particular emphasis on meeting efficiency, performance, and cost targets. Specific emphasis shall be on achieving the performance and cost goals stated in the 2011 Multi-Year Program Plan http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/ssl_mypp2011_web.pdf for Solid-State Lighting Research and Development.
- 4. Obama Announces \$4B in Energy Upgrades** - The \$4 billion investment announced today includes a \$2 billion commitment, made through the issuance of a presidential memorandum, to energy upgrades of federal buildings using long term energy savings to pay for up-front costs, at no cost to taxpayers. In addition, 60 CEOs, mayors, university presidents, and labor leaders today committed to invest nearly \$2 billion of private capital into energy efficiency projects. This announcement builds on a commitment made by 14 partners at the Clinton Global Initiative America meeting in June to make energy upgrades across 300 million square feet, and to invest \$500 million in private sector financing in energy efficiency projects. 12/2 UPI
- 5. Establishing LED Equivalency** - DOE recently published a Fact Sheet, "Establishing LED Equivalency." It summarizes a number of key performance characteristics to consider when comparing LED products and evaluating their equivalency to conventional lighting technologies. It summarizes key performance characteristics that should be considered when comparing LED products and evaluating their equivalency to conventional lighting technologies. No two products are identical in every respect, and tradeoffs are often necessary due to inherent differences in technologies. In fact, it may be possible to improve performance in one category, such as color rendition, while achieving equivalency in others. For any given application, a number of additional characteristics should be considered during product selection. Notable examples include sensitivity to heat in enclosed spaces, dimming capability and behavior, flicker, and power factor. <http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/establishing-led-equivalency.pdf>
- 6. LIGHTFAIR International Already 99 Percent Sold Out for May 2012 Show in Las Vegas** - LIGHTFAIR INTERNATIONAL (LFI) will connect tens of thousands of lighting professionals with more than 475 world-renowned exhibitors at the lighting industry's premier event taking place May 7-11, 2012 in Las Vegas. Already the show is 99 percent sold out, a strong testament to its strength and importance in the architectural and commercial lighting industries. And it looks like it will be returning to the Pennsylvania Convention Center in Philadelphia in 2013. www.lightfair.com

7. **LEDucation 6 Announced for March 21, 2012 in New York City** - The Designers Lighting Forum of New York (DLFNY) has announced the date for its sixth annual program on led technology. Over 2,000 members of the lighting design, architectural and engineering community are expected to attend LEDucation for its sixth annual educational event and expo on LED technology. Due to the growing popularity of the annual expo and seminars, event officials have extended the exhibit hours for 2012 with expo doors opening at 10:00 a.m. to 8:00 p.m. <http://www.leducation.org/>

8. **Bank of America Announces Recipients of \$55 Million Energy Efficiency Finance Program** - Bank of America today announced the selection of Community Development Financial Institutions (CDFIs) that will receive \$55 million in low-interest loans and grants through the company's innovative Energy Efficiency Finance Program. B of A, the nation's largest investor in CDFIs and a leading source of energy efficiency sector financing, created the program earlier this year to deliver low-cost capital to local community lenders with expertise in energy retrofit financing as a way to help create jobs, improve affordability, and reduce carbon emissions. www.bankofamerica.com/reports

9. **Lasers Could Offer Alternative to LED Light Sources** - Two recent announcements, from Sandia Labs and car maker BMW, have suggested that lasers could ultimately provide a more-efficient alternative to LEDs in certain lighting applications. Sandia conducted experiments to evaluate whether a four-color laser system could provide a viable white-light illumination source. Meanwhile, BMW has demonstrated a prototype laser-based headlight system on its i8 Concept car that uses blue lasers and phosphors. The Sandia experiment combined the output of four laser colors - blue, red, green and yellow - to create a white light source that was compared with other light sources, including incandescent and LED-based sources. <http://www.ledsmagazine.com/news/8/11/2>



10. **15 Percent by 2020?** - A new survey of energy industry experts reveals a surprising consensus on the size of the energy efficiency resource. Overall, energy efficiency is expected to lower electricity consumption by 5 to 15 percent and natural gas consumption by 5 to 10 percent. These results debunk the notion that conservation is a fad. On the contrary, they herald a new beginning for energy efficiency. Optimists say energy efficiency is an inexhaustible well. Pessimists argue that the low-hanging fruit has been harvested. Realists believe the truth is somewhere in the middle. http://www.brattle.com/_documents/UploadLibrary/Upload990.pdf

11. **DOE Municipal Solid-State Street Lighting Consortium** - The DOE Municipal Solid-State Street Lighting Consortium shares technical information and experiences related to LED street and area lighting demonstrations. The Consortium also serves as an objective resource for evaluating new products on the market intended for street and area lighting applications. Cities, power providers, and others who invest in street and area lighting are invited to join the Consortium and share their experiences. <http://www1.eere.energy.gov/buildings/ssl/consortium.html>

12. **Switching to Efficient Lighting** - Shopping for energy-efficient lighting can now be as quick as screwing in a light bulb. These apps not only help you find a light bulb that fits your lighting needs, but also calculate savings from replacing your current bulb and estimate the payback period:

- CFL Light Bulb Savings Calculator for CFL options
- EnerSave for LED options
- Light Bulb Finder is an award winning app that places an order for your light bulbs.

<http://ase.org/topics/lighting>

13. **Incandescent Lamp Index Increases During Second Quarter** - NEMA's shipment index for incandescent lamps increased for the second consecutive quarter in Q2 2011, showing an improvement of 5.6% over the same period last year. Conversely, the index for CFLs declined for the fifth consecutive quarter. Moreover, the rate of decline in the shipments index accelerated to 18.5% on a year-over-year basis versus 16.8% y/y and 8.7% y/y during Q1 2011 and Q4 2010, respectively. <http://www.lightnowblog.com/>

14. NEMA Calls on Congress to Take Action to Extend Expiring Tax Provisions - NEMA joined other businesses, non-profit organizations, and associations in calling on Congress to act quickly to pass legislation that would extend tax provisions that are slated to expire at the end of 2011. Expiring tax provisions that of importance to the electroindustry include those affecting plug-in electric vehicles, research and development, energy-efficient home construction, additional first-year 100 percent depreciation for certain improvements, and 15-year straight line cost recovery for qualified leasehold improvements. <http://www.nema.org/media/pr/20111109a.cfm>

15. Google Pulls the Plug on Its RE<C Green Energy Program - Google has decided to power down its 4-year-old RE<C program, the company's ambitious initiative to make renewable energy cheaper than coal. Google has been edging away from its bold energy initiative since summer when it announced that it would end its PowerMeter home energy management program by mid-September. Microsoft made a similar decision about the same time, then Cisco said it would withdraw from building and home energy management markets. <http://www.greenbiz.com/blog/2011/11/23/google-pulls-plug-its-rec-green-energy-program>

16. 50% Advanced Energy Design Guides Free Download from ASHRAE - The Advanced Energy Design Guide series provides a sensible approach to easily achieve advanced levels of energy savings without having to resort to detailed calculations or analysis. The four-color guides offer contractors and designers the tools, including recommendations for practical products and off-the-shelf technology, needed for achieving a 50% energy savings compared to buildings that meet the minimum requirements of ANSI/ASHRAE/IESNA Standard 90.1-2004. The energy savings target of 50% is the first step in the process toward achieving a net-zero energy building, which is defined as a building that, on an annual basis, draws from outside resources equal or less energy than it provides using on-site renewable energy sources. Free downloads at: <http://www.ashrae.org/publications/page/aedg50pct>



17. EPA Launches CFL Website - The U.S. Environmental Protection Agency has published a webpage devoted to compact fluorescent lamps, including benefits, disposal and cleanup procedures, legislation impacting availability of incandescent lamps, and details about the new Federal Trade Commission Lighting Facts label that is taking effect June-December 2011. <http://www.epa.gov/cfl/>

18. North American Business Conditions Improve in October with Further Gains Seen Over Next Six Months - NEMA's Electroindustry Business Confidence Index (EBCI) indicated that conditions facing the North American electroindustry improved on balance in October, climbing to 57.4 from 50 in September. The latest month was the first since May in which the index exceeded the 50-point "growth threshold." Meanwhile, October's EBCI for future North American conditions moved higher for a second straight month, increasing to 63 from 58.3 a month ago. <http://www.lightnowblog.com/>

19. October Housing Starts Slip to a 628,000 Rate - There were several mixed signals jumping out of the data. First of all, last month's housing starts weren't as strong as originally reported. The September rate was revised downward from 658,000 to 630,000. The October figure was down 0.3% from the downwardly revised rate. Here's the good news. This month's starts are up double digits -- 16.5% -- from the same month last year. Also strong is this month's building permits figure of 653,000, up 10.9% from the September rate and up 17.7% above the Oct. 2010 estimate. 11/17 HCN

20. Existing Home Sales Improved in October - According to data released Monday by the National Association of Realtors (NAR), existing-home sales in October rose 1.4% to a seasonally adjusted annual rate of 4.97 million. Compared to a year ago, the current figure is up 13.5%. An ongoing positive trend is a steady decline in the number of homes on the market. 11/22 HCN

21. **U.S. Unemployment Rate Drops to 8.6 Percent; Economy Adds 120,000 Jobs** - Small businesses and startups that were skittish about the economy this summer started hiring in bigger numbers this fall, helping drive the unemployment rate down to 8.6 percent in November, the lowest in two and a half years. 12/2 Washington Post

22. **Consumer Confidence Heads in the Right Direction** - The Conference Board reported Tuesday morning that its Consumer Confidence Index increased to 56.0 in November, up from 40.9 in October. That's not the only metric improving. The Expectations Index rose to 67.8 from 50.0, and the Present Situation Index increased to 38.3 from 27.1. Consumers appear to be entering the holiday season in better spirits, though overall readings remain historically weak. The November confidence metric of 56.0 was also ahead of Nov. 2010, when the index stood at 54.3. 11/29 HCN

23. **Special Offers and Rebates from ENERGY STAR Partners** - To encourage customers to buy energy efficient products, ENERGY STAR partners occasionally sponsor special offers, such as sales tax exemptions or credits, or rebates on qualified products. Partners also occasionally sponsor recycling incentives for the proper disposal of old products. The search is provided as a service to consumers to find such special offers or rebates where they exist, based on information that partners submit to ENERGY STAR. http://www.energystar.gov/index.cfm?fuseaction=rebate.rebate_locator

24. **Energy Efficient Lighting for Commercial Markets** - For more than 130 years, the world has relied on variations of incandescent and gas-discharge lamps to illuminate commercial buildings. With the rise of the general illumination white LED lighting only a few years ago, the lighting industry is experiencing its first revolutionary change since the commercialization of the fluorescent lamp in the 1930s. As the semiconductor and software industries converge on the traditional lighting world, Pike Research expects that the lighting industry will see more change in the next five years than in the previous 50. By the end of our 10-year outlook, LED solid state lighting will not only capture over 50% of the global market, but the extraordinary lifetimes of these lamps will drive a steady decline in the commercial lamp market despite a steadily growing base of new buildings and access to electricity in emerging countries. This Pike Research report describes the key factors that are influencing the market for energy efficient lighting around the world. <http://www.pikeresearch.com/research/energy-efficient-lighting-for-commercial-markets>

25. **Energy Management Learning Portal** - A new energy management learning portal is now available on the RETScreen website. This online resource provides free access to the RETScreen energy management software tool, user manual, presentation slides and case studies. Released just this past month, the RETScreen energy performance analysis module already has more than 9,000 users worldwide. This free energy management software tool is available in 36 languages covering greater than 2/3rds of the world's population. http://www.etscreen.net/ang/performance_analysis_with_retscreen.php

26. **The Math Changes on Bulbs** - Companies like Wal-Mart Stores Inc., GNC Corp. and Caesars Entertainment Corp. are shelling out for the advanced new lights. Consumers can get by using CFL bulbs in their lamps. But for specialized commercial applications like refrigeration, parking lots and lobby lighting, the answer is LED, some businesses say. Last month, Wal-Mart opened its first U.S. store lit entirely with LEDs, a 40,000 square foot store in Wichita, Kan. The world's largest retailer will use only LED lights in the parking lots of new stores around the world. GNC Holdings Inc. and Starbucks Corp. have converted all of the lighting in their outlets to LEDs. A year ago, Home Depot introduced a LED bulb that gives off as much light as a 40 watt incandescent bulb—but it cost an eye-popping \$21. Today, that bulb sells for \$9.97. 11/30 The Wall Street Journal

27. **Transitioning to LED Lighting Technology: MaxLite Helps Facilities Reduce Lighting Energy** - While in the past LEDs were mainly used for exit signs, traffic lights, and spotlights, today many LED lamps are omnidirectional and are the ideal energy-efficient and environmentally friendly lighting solution for decorative, ambient and general lighting applications. [MaxLite white paper about LED on Today's Facility Manager website.](#)

28. **Pournaras Succeeds Mix as President of WattStopper** - Lighting control manufacturer WattStopper, a Santa Clara, Calif.-based part of the Legrand group, announced today the resignation of its president, Jerry Mix, and the immediate appointment of Dean Pournaras to that position. Mix, who co-founded WattStopper 28 years ago, will be joining Finelite as chief executive officer on January 1, 2012. Terry Clark, founder of Finelite, will assume the role of Executive Chairman, as well as, Chief Technology Officer. <http://livewire.electricalmarketing.com/>

29. **Meet the Associate: Philips Lighting** - The Alliance to Save Energy's President Kateri Callahan interviews Philips Lighting North America's CEO Ed Crawford. They discuss how light-emitting diodes shine in one of the most popular holiday displays in the world. <http://ase.org/resources/meet-associate-philips-lighting>

30. **SYLVANIA Socket Survey** - The SYLVANIA Socket Survey is the only nationwide measure of public attitudes about efficient lighting and awareness regarding the U.S. phase-out of inefficient incandescent light bulbs. The majority of Americans are now aware of the federal phase out of incandescent light bulbs, according to the fourth annual SYLVANIA Socket Survey. Beginning January 1, 2012 with the manufacture of 100-watt bulbs, 55 percent of Americans reported that they are aware of the phase out--up 19 percent from 2010. While a large majority still uses incandescent bulbs, 53 percent plan to switch to LED, CFL or halogen varieties when the phase out begins in 2012. Download the complete survey free at <http://www.sylvania.com/Energy/SocketSurvey/>

31. **OSRAM SYLVANIA Introduces ELOGIC Wireless Dimming Technology** - OSI's ELOGIC™ Lighting Controls solution includes dimmable fluorescent ballast controls as well as dimmable LED power supply controls using wireless dimmer technology based on the company's work with the EnOcean Alliance, a consortium of companies working to standardize and internationalize energy harvesting wireless technology for green intelligent buildings. The dimmable fluorescent ballast and LED power supply controls can both be addressed using OSRAM SYLVANIA's wireless and battery-free single and dual rocker switches that have both manual ON/OFF switches as well as automatic OFF functionality. <http://www.sylvania.com/>

32. **Cree LMH2 LED Modules Bring Unrivaled Efficacy and Light Quality** - Cree, Inc. announces the commercial availability of the new LMH2 LED module family, designed to speed time-to-market for high-quality LED luminaires. The LMH2 is the only LED module delivering 80-lumens-per-watt system efficacy combined with CRI greater than 90. The modules feature Cree TrueWhite® Technology. The LMH2 is available at 850 and 1250 lumens and in color temperatures of 2700 K, 3000 K, 3500 K and 4000 K and is designed for 50,000 hours of operation and dimmable to five percent www.cree.com/modules



33. **LG and Other Korean Giants Face Ban on LED Luminaire Sales** - Korean chaebols – giant industrial conglomerates – such as LG and Samsung, have been told that they cannot sell LED luminaires in Korea, in order to protect the interests of smaller manufacturers. LED luminaires were included in a list of 25 business items that are now restricted to production by small companies only. The list was announced by Korea’s Commission for Shared Growth for Large and Small Companies. <http://www.ledsmagazine.com/news/8/11/5>

34. **Shipments of LED Lamps and Luminaires to Exceed 500 Million Units in Asia Pacific by 2021** - While energy-efficient products are an expensive form of lighting for many customers in the Asia Pacific region, the higher costs are increasingly justified by the higher efficacy and performance compared to traditional lighting products. As a result, demand for LED products is growing among customers in developed countries such as Japan and Korea. Moreover, a number of regional and national government programs are in place to promote LED lighting, and these initiatives will serve as a key driver of the market in the coming decade. LED is now viewed as an affordable and efficient technology with long-term benefits. According to a new report from Pike Research, sales of LED lighting systems will increase rapidly over the next 10 years, accelerating sharply after 2015. Unit shipments, including lamps and luminaires, will rise from 66 million in 2011 to 542 million in 2021 – an increase of more than 700%. <http://www.pikeresearch.com/research/energy-efficient-lighting-in-asia-pacific>

35. **China Will Phase Out Energy-Draining Light Bulbs** - China will phase out power-draining light bulbs within five years in a move to make the world’s biggest polluting nation more efficient but also certain to impact the global market. China will ban imports and sales of 100-watt-and-higher incandescent bulbs from Oct. 1, 2012. Bans will also be imposed on 60-watt-and-higher bulbs from Oct. 1, 2014 and 15-watt-and-higher old-style bulbs from Oct. 1, 2016. Last year, 3.85 billion incandescent light bulbs were produced in China and 1.07 billion of them were sold domestically. Power consumption for lighting is estimated to be about 12 percent of China’s total electricity use. 11/4 AP

36. **GLOBALCON Conference and Expo** -The Association of Energy Engineers (AEE), along with sponsors, Hess, Constellation Energy, North America Power Partners (NAPP) and others to present GLOBALCON 2012 on March 7-8, 2012 in Atlantic City, NJ. It will feature a multi-track conference program, free expo and exhibit hall workshops, and networking opportunities. www.GLOBALCONEvent.com



STATE ENERGY ISSUES TO WATCH:

37. **Walmart Sees the Light for Parking Lots** - Walmart in Leavenworth, Kansas, was the first to include LED parking lot lighting based on a specification developed through the Energy Department’s Building Technologies Program, the Retail Energy Alliance and the retailer. Since January, Walmart has planned to install similar lighting system at more than 225 new sites. <http://energy.gov/articles/walmart-sees-light-parking-lots>

38. **Ceres, California, to Use CEC Loan to Purchase 2,200 BetaLED Streetlights** - The city council of Ceres, California, approved the use of a low interest loan from the California Energy Commission (CEC) for the purchase of LED streetlight fixtures earlier this week. The loan will allow the city of Ceres to convert all city-owned streetlights to LED streetlight fixtures, starting in January 2012. Funds totaling \$1.193 million will be used to purchase and install over two thousand LED streetlight fixtures manufactured by BetaLED, a division of Ruud Lighting/Cree of Sturtevant, Wisconsin. <http://www.newstreetlights.com/index.htm>

39. **Sacramento Parking Garage LED Installation** - In the area of outdoor SSL deployments, the city of Sacramento, California has completed the installation of LED lighting in five of eight city-owned parking garages according to the Sacramento Press. The remaining three garages will be retrofitted by February. The total cost of the project is \$1.3 million. But the city received utility incentives and federal and state grants to cover the cost of the SSL installation.

MONTHLY FEATURE:

Establishing LED Equivalency - An LED product package states “energy-saving 60-watt equivalent,” implying a direct one-for-one replacement for the common 60 W incandescent light bulb. Will it really produce the same quantity and quality of light? The checklist below summarizes key performance characteristics that should be considered when comparing LED products and evaluating their equivalency to conventional lighting technologies. No two products are identical in every respect, and tradeoffs are often necessary due to inherent differences in technologies. In fact, it may be possible to improve performance in one category, such as color rendition, while achieving equivalency in others. For any given application, a number of additional characteristics should be considered during product selection. Notable examples include sensitivity to heat in enclosed spaces, dimming capability and behavior, flicker, and power factor.

Characteristic Description - Light Output: Will the product appear equally bright? Equivalent products should produce the same light output, as measured in lumens. Wattage (input power) cannot be used to compare light output, even between two LED products.

Spatial Distribution of Light - Will the product direct or focus light in the same manner? Equivalent products should emit similar amounts of light in any given direction. That is, they should have a comparable luminous intensity distribution. It may also be important to consider the pattern created by the light, such as the sharpness of beam edges.

Color Quality and Appearance - What color light does the product emit? How do objects look under the light? An equivalent LED product should emit light that appears the same color (e.g., warm-white or cool-white) as the conventional light source, and any given object should appear the same color when illuminated by the light sources being compared. These attributes are typically characterized using the correlated color temperature (CCT) and color rendering index (CRI) metrics, respectively.

Form Factor - Is the product the same shape and size? A replacement lamp is of little use if it does not fit into an existing luminaire. Equivalent products should be within dimensional tolerances established by the American National Standards Institute (ANSI) for a variety of lamp types.

Compatibility - Will the new product work with my existing system? Different lighting technologies often require different accessory components. It is important to know if the product will perform as desired given the type of transformer, type of dimmer, and the connected load. Manufacturers should provide compatibility charts for their products.

Useful Lifetime - How long will the product last? Comparisons of rated useful lifetime are difficult because of the different rating methods used for LEDs and other light sources. Longer lifetime claims should be accompanied by longer warranty periods, and the product should continue to perform for the duration of the rated life.

Cost - Is the product worth the extra money? It is important to consider lifetime costs, not just the initial cost, because energy and maintenance savings can yield an attractive return on investment. LED products are typically more expensive on a first-cost basis, but prices continue to fall as performance improves.

<http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/establishing-led-equivalency.pdf>