

NATIONAL ENERGY ISSUES TO WATCH:

1. **NEMA Publishes White Paper on Metal-Halide Lighting Systems** – The National Electrical Manufacturers Association (NEMA) has published LSD 54-2010, “The Strengths and Potentials of Metal-Halide Lighting Systems.” This new white paper, developed by the NEMA Lamp Section, reviews the beneficial characteristics of metal-halide high-intensity discharge (HID) lighting, including high energy efficiency and viability in outdoor and other lighting applications. The paper argues for the inclusion of HID lamps in Energy Star requirements and for allocations of federal funding to help propel further research and development. LSD 54 may be downloaded at no charge: <http://www.nema.org/stds/lsd54.cfm> 5/25 EC&M

2. **A BILL S. 1462 “American Clean Energy Leadership Act of 2009”** - To promote clean energy technology development, enhanced energy efficiency, improved energy security, and energy innovation and workforce development, and for other purposes. Some sections to note:

- Sec. 224. Portable light fixtures.
- Sec. 225. GU-24 base lamps.
- Sec. 226. Standards for certain incandescent reflector lamps and reflector lamps.
- Sec. 241. Greater energy efficiency in building codes.
- Sec. 262. State energy efficiency retrofit programs.

http://energy.senate.gov/public/index.cfm?FuseAction=IssuesItems.Detail&IssueItem_ID=1fbce5ed-7447-42ff-9dc2-5b785a98ad80

3. **LED Bulbs for the Home Near the Marketplace** - Two of the lighting industry’s three biggest manufacturers, Osram Sylvania and Philips, plan to sell energy-efficient LED bulbs this year that can replace a 60-watt bulb, the most commonly used incandescent lamp. The third company, General Electric, will sell an LED equivalent to a 40-watt bulb this year, but it will not have a 60-watt replacement ready until 2011. CFLs have been unpopular with consumers, and LED bulbs have been too dim. But Osram’s Ultra bulb, available in August, and Philips’s EnduraLED, which will be in stores in the fourth quarter, will use just 12 watts of power to equal the light output of a 60-watt bulb. All three major companies say they are working with regional utilities to offer rebates that could lower the price to something that could immediately be affordable. 5/17 NY Times

4. **Home Star Passes in House** - “Home Star Energy Retrofit Act” (H.R. 5019) passed the U.S. House of Representatives by a vote of 246 to 161. The legislation, sponsored by Reps. Peter Welch (D-Vt.) and Vern Ehlers (R-Mich.), will provide temporary consumer incentives to stimulate energy-efficient home improvements. The House must still appropriate the \$6 billion authorized for the Home Star program. The U.S. Senate has not yet scheduled consideration of the legislation.

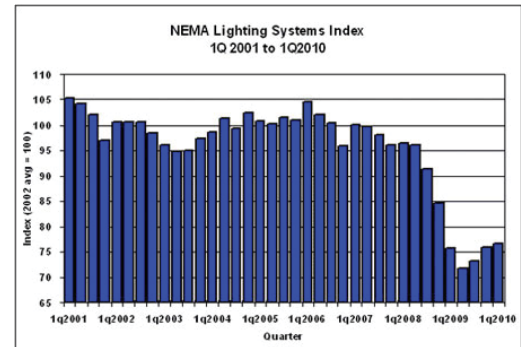
5. **DOE Launches New Version of Commercial Lighting Solutions Web Tool** - The DOE recently launched a new version of its Commercial Lighting Solutions Web tool expanding energy-saving lighting solutions and approaches to offices and institutional buildings. The Web tool provides detailed instructions to help building owners and operators reduce the energy used by commercial lighting by 30% or more. DOE, in partnership with top lighting designers, architects, and commercial end-users, developed Commercial Lighting Solutions and its interactive Web tool, which estimates energy savings based on project-specific inputs. Although the first version of the Web tool offered solutions for five types of retail stores, this latest version offers solutions for offices and institutional buildings. 5/19 EC&M

6. **DOE Releases New LED Test Results** - The DOE has completed Round 10 of product testing through the DOE Solid-State Lighting (SSL) CALIPER program. Round 10 included four primary focus areas: parking structure luminaires, outdoor wallpack luminaires, cove lighting luminaires (including two products marketed as “AC LED” products), and replacement lamps.

http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/caliper_round-10_summary.pdf

7. Lighting Systems Index Climbs for Third Consecutive Quarter - NEMA's Lighting Systems Index increased 1.1 percent on a quarter-to-quarter basis during the first quarter of 2010.

On a year-over-year basis the index posted a similar increase of 1.2 percent, marking the first time since the second quarter of 2006 that the LSI has registered an appreciable gain compared to the same period a year ago. Three types of lighting systems (large lamps, emergency lighting equipment and fixtures) saw very modest declines in seasonally- and inflation-adjusted shipments, but these losses were more than offset by gains in miniature lamps and fluorescent ballasts. Although the LSI has increased in each of the last three quarters, the gains have been relatively modest and overall lighting equipment demand remained at a low level during the first quarter of 2010. 5/25 EC&M <http://www.nema.org/media/pr/20100519a.cfm>

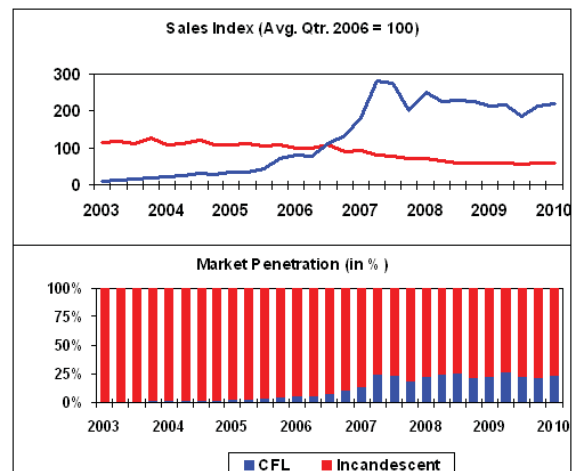


8. Universal Display Team Awarded \$4 Million Contract from the DOE to Support Establishment of an OLED Lighting Pilot Manufacturing Facility in the U.S. - Universal Display Corporation, based in Ewing, New Jersey, enabling energy-efficient displays and lighting with its UniversalPHOLED™ technology and materials, announced that the company, along with Moser Baer Technologies, has been awarded \$4,000,000 for a two-year program from the DOE under the American Recovery and Reinvestment Act of 2009 for a program titled "Creation of a U.S. Phosphorescent OLED Lighting Panel Manufacturing Facility." www.universaldisplay.com

9. Report from LightFair in Las Vegas - A tidal wave of new LED products flooded the 475 booths at this year's LightFair trade show and conference in Las Vegas, which attracted more than 20,000 lighting professionals. In addition to new LED products from established lighting players and long-time LightFair exhibitors such as GE Lighting, Philips, Osram Sylvania, Cooper Lighting, WAC Lighting and Acuity Brands, Sharp and Toshiba were on the scene for the first time and announced their intentions to aggressively market their LED products in the U.S. market. Schneider Electric, through its Juno Lighting subsidiary, and Hubbell Lighting also had broad offerings of new LED products. http://enews.penton.com/enews/electricalwholesaling/green_biz/2010_05_21_green_opportunities/display

10. New USGBC Unveils \$72 Billion in Federal Programs for Sustainability - A new report by the USGBC documents all of the existing legal authorities that federal agencies can implement to improve a sustainable, green buildings agenda. Titled "Using Executive Authority to Achieve Greener Buildings: A Guide for Policymakers to Enhance Sustainability and Efficiency in Multifamily Housing and Commercial Buildings," the report found there exists over 30 federal programs totaling \$72 billion to enhance green buildings. These funds require no new legislation or authority from Congress and are immediately available to the Obama administration. 5/10 Buildings

11. NEMA's CFL Lamp Index Posts Solid Growth During First Quarter of 2010 - NEMA's compact fluorescent lamps (CFL) index reversed a negative trend that dated back to the first quarter 2009, registering a 3 percent year-over-year increase. Conversely, the incandescent lamps index fell to its second lowest level on record showing a year-over-year decline of 2.2 percent during the first quarter of 2010, which maintains a three and a half year streak of deterioration for this market segment. The dichotomous growth patterns between residential incandescent lamps and medium screw-base CFLs resulted in CFLs regaining market share, increasing to 24.2 percent from 22.0 percent in 2009Q4. Consumers appear to be more willing to absorb the higher up-front costs of CFLs versus incandescent lamps, due in part to the U.S. economy remaining on a path of recovery. <http://www.nema.org/media/pr/20100526b.cfm>



12. **IMARK Joins Two Other Distributor Cooperatives to Create United Cooperative Alliance of America** - by Doug Chandler April 13th, 2010 Electrical distributor buying/marketing group IMARK Group, Oxon Hills, Md., has joined forces with distributor cooperatives in two other vertical industries to create an umbrella group, United Cooperative Alliance of America. The venture joining IMARK with Blue Hawk in the HVACR industry and Embassy Group Ltd. in plumbing and PVF will seek to "enhance business practices across multiple verticals." <http://livewire.electricalmarketing.com/category/channel-chatter>

13. **Walmart: Still the Green Giant** - WMT's 2010 Global Sustainability Report, which was released recently, provides a snapshot of the retailer's work. The 47-page report is, if nothing else, a reminder of the scope and depth of WMT's efforts -- the company is buying renewable power, reducing packaging, reducing waste, making its fleet more efficient, and selling more sustainable products, and not just here in the U.S. <http://walmartstores.com/sustainability/7951.aspx> Read more: <http://www.greenbiz.com/blog/2010/05/20/walmart-still-green-giant#ixzz0pQaZiqFR>

14. **New Home Sales Up Again in April** - Lifted by a race to cash in on the expiring home buyer tax credit, new home sales for April increased 14.8% to a seasonally adjusted annual rate of 504,000. The April estimate was also 41.8% above the April 2009 estimate of 341,000. The effective cutoff for the federal home buyer's tax credit of up to \$8,000 was April 30. Regionally, the Midwest increased 31.6%, the South increased 10.8%, and the West increased 21.7% for April, while the Northeast remained flat. 5/26 HCN

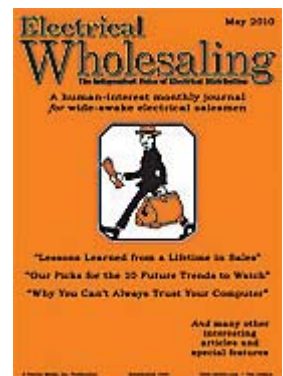
15. **Green Lighting** - By Beck Ireland, Staff Writer EC&M 4/10. Despite the severe downturn in construction brought on by the recession, industry experts are expecting the green building market to more than double by 2013. In its market research report, "2009 Green Outlook: Trends Driving Change," McGraw-Hill Construction, New York, is predicting sustainable design and construction to reach \$96 billion to \$140 billion for residential and non-residential buildings. Among other reasons, the report credits governmental policies and regulations, which run the gamut from encouraging to requiring green building practices and the development/use of green technologies, for insulating the green building market from the negative forces ruling the current construction economic climate.

16. **Squeezing More Light Out of Tighter Energy Codes** - By Eric Richman, Pacific Northwest National Laboratory. What electrical contractors should know about energy code requirements and their exemptions/allowances relating to lighting power density and control. For information on state adoption of codes: <http://www.energycodes.gov/states/> or <http://ecmweb.com/lighting/energy-code-compliance-20100401>

17. **Ten Trends that Will Rock the Industry** - By Jim Lucy, Chief Editor and Doug Chandler, Executive Editor. New technologies, new techniques and new demands from customers will continue to shake things up. Some of the forces that will drive those changes are already underway.

- 1) Grids Get Smart
- 2) Radical Lighting, Beyond LEDS
- 3) Charge of the EV Brigades
- 4) Making Peace with the Aftermarket
- 5) Green is not Just a Sales Pitch
- 6) Homes Powered by PV Roof Shingles
- 7) The Tablet Computer: an Idea Whose Time has Come?
- 8) BYD Co. Ltd.: A Chinese Giant you May Meet Soon?
- 9) Distributors as General Contractors?
- 10) Dealer, Distributor, Contractor... or Something Entirely Different?

http://eweb.com/mag/electric_ten_trends_rock



18. **What's Next?** by Susan Bloom in the *Electrical Wholesaling Magazine's* May "90th Anniversary" Issue - Until nonresidential construction improves and the lending environment loosens up, green electrical products seem to be one of the best bets in the years to come. A must read:

- The economic and legislative landscape: 2010-2020
- Products of the future
- Green is in
- Incentives abound
- Value-added approach

<http://ewweb.com/>

19. **Robert E. Horner Assumes Position with the IES** - The Illuminating Engineering Society (IES) announced that Robert Horner has accepted the newly established position of Director of Public Policy. Bob began working for OSRAM SYLVANIA (Danvers, MA) in 1993, assuming positions of Commercial Engineering Manager, Product Group Marketing Manager for Fluorescent Lamps, Marketing Manager for Linear Fluorescent and Business Manager, Visualization and Imaging.

20. **Light and Color: Rendering Colors and Skin Tones** - Posted on May 27, 2010, 6:40 AM, by Craig DiLouie, under Lighting Design Light is actually made up of colors. For an object to be perceived a certain color, that color must be present both in the object and the light striking it. Because of this, choice of lamp can influence how colors are perceived in a space. This means that perception of objects in the space is, to an extent, controllable. Color Tone: The color temperature of a light source, expressed in kelvins (K), indicates the color tone of the light source itself and the light it emits. Light sources are generally classified as "cool" (>4000K), which appear bluish-white; "neutral" (3000K-4000K), which appear white; or "warm" (<3000K), which appear orangish-white. Warm light sources are more heavily laden with red and orange wavelengths, bringing out some flesh tones and richer content in objects that have warmer colors. Cool light sources are more heavily laden with blue and green wavelengths, enriching the visible color content of blue and green objects.

10000+K	North light (blue sky)
7000K	Overcast daylight
6500K	Daylight fluorescent lamp
6000K	Cloudy sky
5500K	Direct mid-summer sunlight
5000K	Direct sunlight, noon daylight
4500K	Sunlight in early morning or late afternoon
4000K	Clear metal halide lamp, cool white fluorescent
3500K	Neutral white fluorescent
3000K	Incandescent lamp, halogen lamp, warm white fluorescent
2500K	Sun at sunrise or sunset
2000K	Candle flame, high-pressure sodium lamp
1500K	Match flame

Color Rendering: Color temperature describes the “whiteness,” “bluishness”, etc. of a light source, its warmth or coolness. However, it does not define how natural the color of objects will appear when lighted by the source. Two light sources can have the same color temperature, but render colors differently. The color rendering index (CRI), a rating scale with a maximum of 100, offers a metric to address this. For most common color temperatures, CRI uses the incandescent lamp as the reference for color rendering (100 CRI). Incandescent lamps, however, are not a perfect light source for color rendering. (They are weak in blue.) So the CRI system has its drawbacks. It is, however, the only internationally agreed upon system for expressing a lamp’s color rendering ability. It should only be used as an indicator of relative, not absolute, color rendering ability.

Type	Correlated Color Temperature (K)	Color Rendering Index (CRI)
Incandescent	2700	90-95
Halogen	2900	90-100
Fluorescent	3000-6000	50-90
Mercury Vapor	3000-6000	20-50
Metal Halide	3000-4500	60-70
High Pressure Sodium	2000-3000	20-30

Performance characteristics of major lamp types. Source: LIGHTFAIR 2009 Lamp and Ballast Basics Seminar by Craig A. Bernecker, PhD, FIES, LC.

STATE ENERGY ISSUES TO WATCH:

1. Energy Appliance Rebates Exhausted -

- New York’s appliance rebate program has worked its way through more than \$16 million in federal funding, and is winding down.
- Arkansas has \$2.74 million for rebates to consumers...about \$860,000 has been claimed so far, leaving nearly \$1.88 million.
- West Virginia is getting ready to roll out its energy-efficient appliance rebate program with more than \$1.7 million in federal stimulus money.

2. EPA Helps States and Utilities Tap into Greater Energy Efficiency Savings - In partnership with several states and utilities, the EPA today announced a new pilot program designed to further improve commercial building energy efficiency. Building Performance with Energy Star will help utilities and state energy efficiency programs achieve increased energy savings and fight climate change by strategically pursuing whole building energy improvements with their business customers. The pilot program is being launched with Energy Star partners Com Ed, MidAmerican, National Grid, the New Jersey Board of Public Utilities, Pacific Gas & Electric, Southern California Edison and Wisconsin Focus on Energy. Learn more: http://www.energystar.gov/index.cfm?c=reprs.pt_reps

3. Local Ordinances Exceeding the 2008 Building Energy Efficiency Standards - Public Resources Code Section 25402.1(h)2 and Section 10-106 of the Building Energy Efficiency Standards (Standards) establish a process which allows local adoption of energy standards that are more stringent than the statewide Standards. This process allows local governments to adopt and enforce energy standards before the statewide Standards effective date, require additional energy conservation measures, and/or set more stringent energy budgets. The California Energy Commission commends the local agencies that have adopted energy ordinances requiring more stringent energy requirements than those set by California’s 2008 Building Energy Efficiency Standards Title 24, Part 6. Listed on: <http://www.energy.ca.gov/title24/2008standards/ordinances/>

4. New, Green City Hall Designed for a Century - There are hardly any light switches in the new Oak Park Heights, MN City Hall. Energy-saving LED lights turn on only if a sensor detects motion, heat and sound; photometric sensors adjust indoor lighting to compensate for daylight. The new \$6.5 million municipal building, which opened May 17, also features a state-of-the-art geothermal heating and cooling system, rain gardens and a heat-recovery system that reclaims energy from the air before it is discharged outside. 5/10 Pioneer Press

5. Dominion Virginia Power Expands CFL Discounts, Offers New Energy Efficiency, Demand Reduction Programs - Dominion Virginia Power has renewed and expanded its instant discounts on energy-efficient compact fluorescent light bulbs (CFLs) and is offering several new programs to help customers get their homes and businesses in shape for improved energy efficiency. Dominion's new lighting program is based on the discount program that provided instant discounts on more than 4 million CFLs sold since December 2007. The new program provides discounts of approximately \$1 to \$6 on a variety of CFL packages. This discount will be available initially at Wal-Mart and Sam's Club stores with additional retailers to follow. A current list of retailers and products is available on Dominion's Web site at: <http://www.dom.com/>

6. Nebraska to Offer Low-Interest Loans for Green Homes - The Nebraska Energy Office is offering residents low-interest loans to go green when building a house. The office is offering 2.5 percent loans through eligible Nebraska lenders for the construction of single family, highly energy-efficient homes. The home must meet or exceed the state's energy code by 30 percent to be eligible. Energy Star 5 Star Plus homes typically feature higher levels of properly-installed insulation, high-performance windows, tight construction and ducts, efficient heating and cooling equipment and Energy Star appliances, lighting and water heaters. 5/15 AP

7. Energy Efficiency Efforts Score Major Success - The New York State Public Service Commission received a report from staff of the Department of Public Service regarding the first quarter performance of the Commission's landmark Energy Efficiency Portfolio Standard (EEPS), one of the most comprehensive and aggressive energy efficiency initiatives in the nation. The fundamental objective of EEPS is to put in place new energy efficiency programs that will help reduce New York's electricity usage by 15 percent of forecast levels by 2015, with comparable results in natural gas efficiency, and to provide a variety of other environmental and economic benefits to New Yorkers. Programs under EEPS are available from State's electric and gas utilities as well as the New York State Energy Research and Development Authority (NYSERDA). To date the Commission has, after careful consideration, approved 90 individual programs supported by about \$922 million of ratepayer funding to be collected through the end of 2011. Staff's report, when issued, may be obtained by going to the Commission Documents section of the Commission's Web site at www.dps.state.ny.us and entering Case Number 07-M-0548 in the input box labeled "Search for Case/Matter Number."

8. Development of Municipal Loan Program for Energy Efficiency Retrofits Approved - The Austin City Council today accepted \$10 million in federal grant funds to develop a municipal loan program to help make energy-efficiency improvements and solar energy installations available to a greater number of Austin Energy businesses and residential customers. This may well lay the groundwork for the next generation of Energy Efficiency Retrofit (EER) programs both in Austin and across the country. One potential component of the program would be development of a Property-Assessed Clean Energy (PACE) financing mechanism whereby property owners could use money from a financing pool and then repay their loans through a property tax assessment. San Antonio also was awarded \$10 million in federal funding for PACE program development. Austin Energy estimates creation of a \$96.5 million EER program would result in energy efficiency and solar installations to some 7,250 homes and businesses during the first three years of the program. Nationally, similar PACE-type legislation has been passed in 17 states with programs currently planned or under way in more than 10 cities and counties across the U.S. <http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/PACE.html>

SPECIAL FEATURE... The Next Generation Lighting Industry Alliance (NGLIA)

<http://www.nglia.org> Formed in 2003 to foster industry-government partnership to accelerate the technical foundation, and ultimate commercialization, of solid state lighting systems. The Alliance was designated in 2005 as the "industry partner" by the U.S. Department of Energy for its Solid State Lighting (SSL) program. The SSL Program is being undertaken to research, develop, and conduct demonstration activities on advanced solid state white lighting technologies based on inorganic and organic light emitting diodes (LEDs and OLEDs).

Once only used for indicator lights, SSL technology is now found in a variety of specialty and niche applications, including automotive brake lights, traffic signals, exit signs, and flashlights. In the use of colored light, SSL is already a viable alternative to conventional sources in many architectural and entertainment applications - from the lighting of exterior facades to stage sets and retail displays. As white LEDs continue to advance, they too will become capable of such higher-luminance applications. SSL is also growing in adoption in the white illumination market for specialty applications.



Research to achieve further technology advances is under way, driving toward development of efficient, full-spectrum, white light SSL sources that will replace low efficiency incandescent and even fluorescent lamps for general illumination. According to the DOE, lighting accounts for 8% of all energy consumption in the United States and 22% of electricity nationwide. LEDs have the potential to reach 200 lm/W, compared to the efficacies of incandescent lamps at 15 lm/W and fluorescent tubes at 90 lm/W. If solid-state lighting replaced all existing lights, the DOE estimates customer savings of \$115 billion by 2025 and a 10% reduction in greenhouse emission gases.



The physical behaviors exhibited by solid state materials are substantially different from traditional lighting technologies. NGLIA promotes the understanding, implementation, and adoption of semiconductor light sources in specialty and general lighting systems. The industry will continue to evaluate new technologies and adopt those that fall within the category of solid state lighting. The solid state lighting industry is tasked with integrating solid state light sources in existing lighting practices and the creation of new practices to fully exploit the technologies' potential. Therefore, the industry will include all related downstream use including applications, control, and power necessary for effective use of solid state light sources. This also includes building and maintaining a center

of expertise, creating definitions of terms, and coordinating activities with the NEMA Solid State Lighting Product Group, the NEMA Lighting Systems Division, and recognized policy and standards setting organizations (e.g. IEC, IESNA). NGLIA recognizes many topics as being of specific concern for solid state lighting including, but not limited to, the following topics: reliability and lifetime, interconnects, efficiency and environmental impact, color standards, user indices, and interpretation, power and control systems, luminaires, lamps and their design, metrology, optical systems, software, human factors, field installation and electrical and building code requirements, compliance and safety, thermal issues, market barriers, product certification, economics, and complete lighting and light distribution systems and their design. Solid State Lighting introduces a whole new level of flexibility in lighting solutions such as control of intensity, color, and other technical parameters; therefore, this scope will be reviewed on an ongoing basis.