

NATIONAL ENERGY ISSUES TO WATCH:

1. **Opportunities for Energy and Cost Savings** - Today's buildings consume more energy than any other sector of the U.S. economy, including transportation and industry. Of the millions of buildings in the U.S. most were built in 1979 and prior, providing us the tremendous opportunity to reduce the nation's energy consumption by increasing the efficiency of aging buildings through retrofits or replacements as needed. In partnership with the private sector, state and local governments, national laboratories, and universities, the DOE Building Technologies Program works to improve the efficiency of buildings and the equipment, components, and systems within them. The program supports research and development (R&D) activities and provides tools, guidelines, training, and access to technical and financial resources. <http://www1.eere.energy.gov/buildings>

2. **Audit Report on "The Department of Energy's Opportunity for Energy Savings Through Improved Management of Facility Lighting"** - The DOE spends nearly \$300 million per year in energy costs for its 9,000 buildings at 24 sites. Electricity costs, totaling \$190 million, account for close to two-thirds of the Department's total energy expenditures, with roughly 40 percent or \$76 million of those costs attributable to the cost of lighting. New lighting technologies and advanced lighting systems offer the Department the opportunity to significantly reduce energy consumption; decrease operating costs at its sites throughout the country; and, demonstrate the benefits of using new lighting technologies that are currently being developed in its laboratories and by other sources. Because of its energy conservation leadership role, we initiated this audit to determine whether the Department's facilities had implemented lighting conservation measures. Our review of lighting equipment and systems in 96 buildings at 7 of the DOE's 24 major sites found significant opportunities for conserving energy and reducing costs. By exploiting readily available efficient lighting and lighting systems opportunities, the Department could save over \$2.2 million in electric utility operating costs annually.

3. **Clarifications Regarding ENERGY STAR SSL Test Procedure Accreditation Requirements** - EPA has received a number of questions about the current and near-future ENERGY STAR testing requirements for lumen maintenance of solid state lighting products. The attached letter provides guidance on lumen maintenance testing requirements for LED packages, arrays, and modules for ENERGY STAR qualification of solid state lighting luminaires and integral LED lamps:

- What documentation must be provided by the LED package, array, or module manufacturer
- Which labs EPA will accept LM-80 data from after September 30, 2010, and
- How EPA will address incremental improvements to LED packages, arrays and modules

4. **Nation-wide Shortage of Electronic Ballasts** - While there has not been a formal press release yet from any of the major lighting fixture or ballast manufacturers, please be advised that this ballast shortage is very real and becoming increasingly wide spread. This shortage is due to a world-wide electronic component shortage encompassing critical capacitors and integrated circuits. Up until now this shortage has affected primarily standard T5 output ballasts. However it has also quickly impacted the availability of High Output T5 and T8 ballasts. All ballasts types are feeling the effects of this shortage; rapid start, instant start and others. You should also expect this to impact the availability of CFL and HID ballasts and LED drivers. This shortage impacts all lighting fixture and ballast manufacturers large and small including; Philips Advance, Cooper Lighting, Acuity Brands and others. www.connexiones.com/industry-news

5. **DOE Publishes Updated SSL Manufacturing R&D Roadmap** - The U.S. Department of Energy has published the 2010 edition of the Solid-State Lighting (SSL) Manufacturing R&D Roadmap. Complementing the SSL R&D Multi-Year Program Plan (MYPP) that guides the Core and Product Development R&D programs, the Roadmap's primary goal is to guide the manufacturing R&D program and help direct funding solicitations for it. Manufacturing R&D is a part of DOE's SSL manufacturing initiative launched in 2009. The Roadmap also provides guidance for equipment and material suppliers, based on industry consensus on the expected evolution of SSL manufacturing - thereby reducing risk, improving quality, increasing yields, and lowering costs. To download a PDF copy of the updated Roadmap, see www.ssl.energy.gov/techroadmaps.html

6. **Solar Plane Lands After Completing 24-Hour Flight** - An experimental solar-powered plane completed its first 24-hour test flight successfully Thursday, proving that the aircraft can collect enough energy from the sun during the day to stay aloft all night. The test brings the Swiss-led project one step closer to its goal of circling the globe using only energy from the sun. The team says it has now demonstrated that the single-seat plane can theoretically stay in the air indefinitely, recharging its depleted batteries using 12,000 solar cells and nothing but the rays of the sun during the day. But while the team says this proves that emissions-free air travel is possible, it doesn't see solar technology replacing conventional jet propulsion any time soon. 7/08 AP

7. **Environmental Visionaries: The Solar Roadrunner** - Highways basking in the hot sun are wasted energy. Scott Brusaw's solution? Make them out of solar panels. The road ahead is paved with photovoltaics. That's how Scott Brusaw sees it, anyway. His company, Solar Roadways, is embedding PV cells and LED lights into panels engineered to withstand the forces of traffic. The lights would allow for "smart" roadways and parking lots with changeable signage, while the cells would generate enough energy to power businesses, cities and, eventually, the entire country. Each 12-by-12-foot Solar Roadway panel would produce about 7,600 watt-hours a day, based on an average of four hours of sunlight. At that rate, a one-mile stretch of four-lane highway could power about 500 homes. Brusaw's goal is to get the cost per panel under \$10,000. That's roughly three times the cost of asphalt. But he wants to make panels that last three times longer than asphalt roads, which have to be resurfaced every 10 years in many places. The key to commercial viability will be the panels' glass. It must be textured for traction, embedded with heating elements for melting away ice and snow, and able to survive years of traffic. <http://solarroadways.com>

See the video: <http://www.consciousmedianetwork.com/video/2010/061810.htm>

8. **Make Over a Room with One Finger, GE Lighting and an iPhone** - The GE Mood Cam™ app www.GEMood-Cam.com allows users to snap pictures of indoor environments, such as a kitchen, living room or bedroom, and change the mood of the room by sliding the Moodometer™ tool to adjust the look from warm (cozy) to vibrant (energetic/creative). The free app provides a Three-Step Bulb Finder that helps users quickly find the right light bulb for the right fixture. Users can produce a shopping list of bulbs that will create a particular mood, and save the list in an at-a-glance format for simple viewing in the lighting aisle of their favorite store. They can also email themselves their custom photos and bulb shopping lists for even easier reference at the store. Insider design tips are offered to help round out the user's vision for a mood-inspired room. The app is a natural extension of GE's What's Your Lighting Style?™ Web site (www.whatsyourlightingstyle.com), which enables consumers to design with light while enhancing their understanding of how lighting contributes to a room's overall lighting style.

<http://www.financialpost.com>

9. **Cree and Phillips Sign Comprehensive LED Patent Cross-License Agreement** - Cree, Inc. and Phillips have signed a comprehensive, worldwide patent cross-license agreement designed to further accelerate the growth of the LED lighting market. Cree and Phillips both hold broad and substantial optoelectronic patent portfolios which are important to their respective businesses. This agreement covers patents from both parties in the fields of blue LED chip technology, white LEDs and phosphors (including remote phosphors), control systems, LED luminaires and lamps as well as LED backlighting of liquid crystal displays (LCDs) and patents in the Phillips LED Luminaire Licensing Program.

<http://finance.yahoo.com/news/Cree-and-Phillips-Sign-bw-1629886194.html?x=0&.v=1>

10. **Reid Unveils Pared-Down Energy and Oil Bill** - Senate Majority Leader Harry Reid unveiled a draft of energy and oil spill legislation Tuesday, having to settle for a far less sweeping bill than the cap on carbon emissions he had hoped for. The new bill would require oil companies to pay higher fees into the Oil Spill Liability Trust Fund and would eliminate the \$75 million cap on economic liability from an oil spill. It calls for spending \$5 billion for the Home Star program, which would provide rebates to consumers to encourage energy efficiency upgrades. It also would fully fund the Land and Water Conservation Fund. 7/27 AP

11. **Fluorescent Magnetic T12 Ballast: RIP by Craig DiLouie, Lighting Controls Association** - As of July 2010, Federal efficiency standards regulating fluorescent magnetic T12 ballasts entered their final phase, effectively eliminating these ballasts from the market, with few exceptions. Between 2005 and 2010, efficiency standards created by DOE regulations became phased into effect, covering magnetic ballasts designed to operate full-wattage F40T12, F96T12 and F96T12HO lamps. Ballast manufacturers were prohibited from manufacturing even replacement ballasts that did not meet the new standards.

http://www.aboutlightingcontrols.org/education/papers/2010/2010_ballast-law.shtml

12. **DOE Announces Plans for Consumer Education Campaign on Lighting Changes** - DOE announced plans today for a new consumer education initiative that will be timed to the upcoming changes in light bulb regulation. The initiative will provide greater awareness of the overall benefits of the legislative changes and new, "greener" technologies, such as LEDs and CFLs. 7/21

http://ecmweb.com/market_trends/doe-consumer-education-20100723

13. **A Survey of the U.S. ESCO Industry: Market Growth and Development from 2008 to 2011** - A report published last month by the Ernest Orlando Lawrence Berkeley National Laboratory offers a great overview on the ESCO market and the huge growth these companies expect during the next 10 years.

<http://eetd.lbl.gov/ea/emp/reports/lbnl-3479e.pdf>

14. **DOE Publishes Recommendations for Rating LED Product Life** - The Department of Energy has published a new guide, LED Luminaire Lifetime: Recommendations for Testing and Reporting, which provides an important first step toward consistent, industry-wide understanding of LED fixture lifetime.

http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/led_luminaire-lifetime-guide.pdf

15. **According to the Building Technologies Program's 2009 Buildings Energy Data Book -**

Residential Data <http://buildingsdatabook.eren.doe.gov/ChapterView.aspx?chap=2>

- The United States had approximately 113 million residential buildings.
- Residences accounted for 21% of primary energy consumption in the U.S. and 20% of carbon dioxide emissions.
- \$225.6 billion was spent on energy for residences.
- 59% of homes were built in 1979 or before.

Commercial Buildings Data <http://buildingsdatabook.eren.doe.gov/ChapterView.aspx?chap=3>

- The United States had 74.8 billion square feet of commercial floor space in 2006.
- Commercial buildings represented 18% of primary energy consumption in the U.S. and used 36% of the nation's electricity in 2006.
- In 2006, \$190.5 billion was spent on improvements and repairs to commercial buildings.
- As of 2003, 54% of commercial buildings were built in 1979 or before.

16. **Energy Efficiency Retrofits for Commercial Buildings Could Save \$41.1 Billion per Year in Energy Costs, Says Pike Research** - Commercial building space in the United States covers a total of 79 billion square feet, and buildings are one of the leading sources of energy consumption and carbon emissions. With more than 80% of commercial buildings being more than 10 years old, they also represent a significant opportunity for energy savings if today's best practices are applied for efficiency retrofits. According to a new report from Pike Research, if all commercial space built as of 2010 were included in a 10-year retrofit program, the savings in energy expenses would have the potential to reach more than \$41.1 billion each year. However, despite these promising numbers, Pike Research's analysis finds that the actual market for energy efficiency retrofits is only a small fraction of the potential. The best-funded opportunities for retrofits today are major upgrades in institutional buildings, especially in federal buildings. This market, already strong because of federal policy mandates and creditworthiness, received a boost from the ARRA. However, federal non-industrial buildings comprise less than 3% of existing commercial space, and the largest untapped potential is for energy retrofits in private commercial buildings. An Executive Summary of the report is available for free download on

www.pikeresearch.com

17. **Compact Fluorescent Lamps Save Energy But Need To Be Disposed of Properly** - With sales of CFLs now reaching about 400 million a year in the United States, according to the federal EPA, concerns over the mercury has grown because many of the lights end up in landfills. California and several other states ban disposal of CFLs in the trash because they could contaminate landfills. But there's little enforcement. Environmental groups such as the Natural Resources Defense Council have taken a close look at the CFL safety issue and have concluded that the energy savings exceed the dangers posed by the mercury the lights contain. 7/13 San Jose Mercury News

18. **2010 Design Competition Now Open** - The Next Generation Luminaires™ (NGL) Solid State Lighting (SSL) Design Competition was created to recognize and promote excellence in the design of energy-efficient LED commercial lighting luminaires. To participate, review the NGL website for competition rules. An Intent to Submit form is due by August 18, 2010. The deadline for final forms and documentation is September 15, 2010 with actual product submission on October 1, 2010. Judging will take place October 28-29, 2010, with results announced in February 2011. There is no fee for participation or limit on the number of products entered. <http://www.ngldc.org>

19. **Target, Wal-Mart, Others, to Pilot Program for Energy Efficiency in Commercial Building** - 3M, Cleveland Clinic, Dow Chemical, Grubb & Ellis, Marriott International, Nissan, Target and Wal-Mart as well as the Massachusetts Institute of Technology will pilot a new program, established by the U.S. and nearly two dozen other countries, aimed at promoting energy efficiency in commercial buildings and industrial facilities, reports Reuters. The Global Superior Energy Performance Partnership (PDF), created to speed efficiency improvements in commercial buildings and industrial facilities, was launched at the first Clean Energy Ministerial. The program has three goals: develop a certification process to ensure continuous energy efficiency improvements, promote the adoption of energy efficient best practices and technologies, and accelerate the use of energy-savings technologies. 7/21 Environmental Leaders

20. **Energy Management Handbook, 7th Edition by Steve Doty and Wayne C. Turner** - Newly revised and edited, this seventh edition includes extensive revisions to seven of its twenty-eight chapters. This comprehensive handbook covers every component of effective energy management, including energy auditing, economic analysis, boilers, steam systems, cogeneration, waste heat recovery, building envelope, HVAC systems, motors and drives / electric energy management, energy management control systems, lighting, energy systems maintenance, insulation systems, alternative energy, sustainability and high performance green buildings, and codes, standards and legislation. <http://www.fairmontpress.com/store/detail.cfm?id=207&itemid=631>

21. **Solar-Powered Light Bulb Is One Denver Inventor's Brilliant Idea** - In his spartan Capitol Hill office, Stephen Katsaros explains how Nokero, the affordable, durable, sun-fueled light, can help the 1.6 billion people worldwide without electricity and wean them from burning dangerous kerosene lamps. At the China factory poised to make 600,000 to 1.2 million bulbs a month, the rain-proof lights are made with impact-resistant plastic and special computer chips to prolong battery life. Four solar panels charge the light, and they should last five years, providing up to four hours of light on a single charge. Already Nokero bulbs are trickling into 33 countries, where tens of millions live without electricity. Bought in bulk, the bulbs cost about \$6 each. Retail, they run about \$15. 7/10 Denver Post

STATE ENERGY ISSUES TO WATCH:

1. **VA Launching Energy Savings Program** - Virginia is launching a program to help people statewide reduce the amount of electricity they use. The program called "Virginia Energy Sense" is being kicked off Wednesday by the State Corporation Commission. Officials say the program uses tools, resources and outreach that together have never been used before in a state-led energy education program to encourage a collective reduction in electricity demand. The General Assembly adopted a goal of reducing Virginia electricity demand by 10 percent by 2022. 7/28 AP

2. Empire State Building Unveils Innovative, Multi-Media Sustainability Exhibit At Visitor's Center - The Empire State Building today unveiled a \$2 million interactive, multi-media sustainability exhibit at the second floor visitor's center, which showcases a \$20 million energy retrofit project that was announced in April 2009. By communicating the compelling story of the building's award-winning retrofit program under way, the installation aims to educate the millions of people who visit the building every year on the positive global impact of both energy efficient building and sustainable living practices. The Empire State Building sustainability exhibit is open seven days a week at the second floor visitor's center during visiting hours from 8 a.m. to 2 a.m. For more information, visit www.esbsustainability.com. 7/27PR Newswire

3. Changing a Light Bulb, One Student at a Time - Students at four schools in Washington, DC gave away 500 compact fluorescent light bulbs to members of their communities. Their efforts were part of a campaign run by the Alliance's Saving Energy in DC Schools program and local utility Pepco, which provided the bulbs free of charge. <http://ase.org/content/article/detail/6757>

4. MEEA Selected By DOE to Provide Expertise on Stimulus Grant Projects - Midwest Energy Efficiency Alliance (MEEA) has been selected by the DOE to assist communities that are conducting energy efficiency programs funded through the American Recovery and Reinvestment Act. MEEA will work with the grantees to assist them with their implementation of their energy efficiency programs funded under ARRA. MEEA, which is based in Chicago and covers a 13-state region, is part of the department of energy's recovery act technical assistance provider network. It will work with communities in the Midwest that have received energy efficiency and conservation block grants (EECBG), and state energy program (SEP) and retrofit ramp-up initiative grants as part of the ARRA. In addition, MEEA will take a leading national role in developing recommended programs and best practices in the area of energy efficient lighting. <http://www.mwalliance.org/> 7/06 PRNewswire

5. City Energy-Efficiency Program to Attract \$72 Million - A new Milwaukee program to help homeowners and businesses cut energy use is expected to attract \$72 million in federal, state and private support to retrofit at least 4,500 buildings over three years, according to a Common Council resolution adopted Tuesday. 7/27 Milwaukee Journal Sentinel

6. ACC Requires 22% Energy-Use Cut by 2020 - State regulators approved rules Tuesday requiring utilities to cut their customers' annual energy use by at least 22 percent by 2020 - among the highest such standards in the nation. The Arizona Corporation Commission approved the rules unanimously, despite objections from utilities including Tucson Electric Power Co. that the goal will be hard - if not impossible - to reach. 7/28 Arizona Star

8. CA State Appliance Rebate Program Expands - The California Cash for Appliances rebate program, which has lagged since launching three months ago, is expanding the list of eligible energy-efficient machines in an attempt to boost interest. Customers have applied for less than \$12 million from a \$31.7-million pot, according to the California Energy Commission, which is administering the program. The state, with its glut of green-minded consumers, was expected to eat through its funds almost immediately. CA's tough energy-efficiency standards prevented many appliances from qualifying for the rebates, customers said. 7/30 Los Angeles Times

7. Colorado Governor Puts Forth Energy Challenge to State Businesses - The plan, officially titled the Colorado Industrial Energy Challenge, is an effort to slash the energy use of Colorado business whose annual utility bills exceed \$200,000. The challenge is voluntary, but so far Gov. Ritter has appealed to the spirit of the following thirteen companies looking to scale back emissions and make Colorado a model state in energy efficiency:

- Amgden
- Aspen Skiing Co.
- Avago Technologies
- Crested Butte Mt. Resort
- Encana
- Frito-Lay
- MillerCoors
- New Belgium Brewing Co.
- Roche Colorado Corp.
- Rocky Mountain Bottle Co.
- Rocky Mt. Metal Container
- Sandoz
- Woodward

SPECIAL FEATURE:

U.S. Department of Energy - Energy Efficiency and Renewable Energy Solid-State Lighting

http://www1.eere.energy.gov/buildings/ssl/printable_versions/reports.html

CALIPER Summary Reports

DOE conducts three rounds of CALiPER testing each year. A Summary Report is published following completion of each round which provides analysis of the test results for all products included in that round.

- Round 10 Summary Report (PDF 1.7 MB)
Report includes test results and analysis for products tested in Round 10, including parking structure luminaires, outdoor wallpack luminaires, cove lighting luminaires, and replacement lamps. (36 pages, May 2010)
- Round 9 Summary Report (PDF 772 KB)
Report includes test results and analysis for products tested in Round 9, including recessed downlights, linear replacement lamps, smaller replacement lamps, and a desk lamp. (33 pages, October 2009)
- Round 8 Summary Report (PDF 308 KB)
Report includes test results and analysis for products tested in Round 8, including replacement lamps, down lights and track lights, undercabinet fixtures, and outdoor fixtures. (28 pages, July 2009)
- Round 7 Summary Report (PDF 1.5 MB)
Report includes test results and analysis for products tested in Round 7, including outdoor area and street lights, downlights, and replacement lamps. (28 pages, January 2009)
- Round 6 Summary Report (PDF 523 KB)
Report includes test results and analysis for products tested in Round 6, including small replacement lamps (MR16, A-lamps, and candelabra lamps), desk lamps, a downlight, a recessed wall fixture, and two different types of outdoor lighting products. (23 pages, September 2008)
- Round 5 Summary Report (PDF 620 KB)
Report includes test results and analysis for products tested in Round 5, including linear, A-lamp, and MR16 replacement lamps, downlights, desk/task lamps, undercabinet lighting, and outdoor lighting. (29 pages, May 2008)
- Round 4 Summary Report (PDF 843 KB)
Report includes test results and analysis for products tested in Round 4, including T8, MR16, and candelabra replacement lamps, downlights, desk/task lamps, and undercabinet and outdoor lighting. (23 pages, January 2008)
- Round 3 Summary Report (PDF 215 KB)
Report includes test results and analysis for products tested in Round 3, including directional and A-lamp replacement lamps, downlights, task lamps, and outdoor fixtures. (18 pages, October 2007)
- Round 2 Summary Report (PDF 432 KB)
Report includes test results and analysis for products tested in Round 2, including R30 and A-lamp replacement lamps, downlights, desk/task lamps, outdoor wall lighting, and refrigerated display lighting. (14 pages, August 2007)
- Round 1 Summary Report (PDF 268 KB)
Report includes test results and analysis for products tested in Round 1, including downlights, desk/task lamps, and undercabinet, outdoor area, and surface mount lighting. (13 pages, March 2007)
- Pilot Round Summary Report (PDF 71 KB)
Report includes test results and analysis for products tested in the Pilot Round of CALiPER testing, including downlights, a task light, and undercabinet lighting. (4 pages, December 2006)

50 Associations for Energy Information:

1. ACCA - Air Conditioning Contractors of America
2. ACEEE - American Council for an Energy-Efficient Economy
3. AEE - Association of Energy Engineers
4. AIA - The American Institute of Architects
5. Air Barrier Association of America Inc.
6. Alliance to Save Energy (ASE)
7. American Council of Engineering Companies
8. American Lighting Association
9. Architexture 2030
10. AMERLUX
11. ASCE - American Society of Civil Engineers
12. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc
13. Associated Builders and Contractors, Inc.
14. Associated General Contractors of America
15. Attardi Marketing
16. Brick Industry Association
17. Center for Environmental Innovation in Roofing
18. Comfort Systems USA Energy Services
19. Conservation Law Foundation
20. Energy Tax Savers Inc.
21. Energy, Water and Taxes, LLC
22. Environmental and Energy Study Institute
23. Facilities Solutions Group (FSG)
24. Federation of American Scientists
25. GreenLink Alliance
26. IESNA - Illuminating Engineering Society of North America
27. Imark Group
28. Independent Electrical Contractors, Inc.
29. IMT - Institute for Market Transformation
30. Insulation Contractors Association of America (ICAA)
31. International Association of Heat & Frost Insulators and Allied Workers
32. International Code Council
33. International Council of Shopping Centers (ICSC)
34. MCAA - Mechanical Contractors Association of America
35. NAED - National Association of Electrical Distributors
36. NAESCO - National Association of Energy Service Companies
37. NAIOP, the Commercial Real Estate Development Association
38. NASEO -- National Association of State Energy
39. National Association of Lighting Management Companies (NALMCO)
40. National Electrical Manufacturers Representatives Association
41. National Institute of Building Sciences
42. National Insulation Association
43. National Ready Mixed Concrete Association (NRMCA)
44. NECA - National Electrical Contractors Association
45. NEEP - Northeast Energy Efficiency Partnerships
46. NEMA - National Electrical Manufacturers Association
47. PIMA - Polyisocyanurate Insulation Manufacturers Association
48. SMACNA - Sheet Metal and Air Conditioning Contractors National Association, Inc.
49. Southeast Energy Efficiency Alliance
50. U.S. Green Building Council