

NATIONAL ENERGY ISSUES TO WATCH:

1. **2010 Market Planning Guide** - Sales of electrical products through electrical distributors will increase by approximately \$2.2 billion next year. This forecast puts U.S. sales for 2010 at \$77.5 billion, a 2.9-percent increase from our 2009 estimate of \$75.3 billion, (a level of sales last seen in 2005). That 2009 sales figure is a 14.4 percent drop from 2008, one of the largest one-year decreases in industry history. While 2010 should be an improvement over this year, it's going to be a tough climb to what may very well be a solid growth environment in 2011 http://ewweb.com/market_planning/guide/2010/guide/



2. **Secretary Chu Announces \$620 Million for Smart Grid Demonstration and Energy Storage Projects** - The DOE is awarding \$620 million for projects around the country to demonstrate advanced Smart Grid technologies and integrated systems that will help build a smarter, more efficient, more resilient electrical grid. These 32 demonstration projects, which include large-scale energy storage, smart meters, distribution and transmission system monitoring devices, and a range of other smart technologies, will act as models for deploying integrated Smart Grid systems on a broader scale. This funding from the ARRA will be leveraged with \$1 billion in funds from the private sector to support more than \$1.6 billion in total Smart Grid projects nationally. http://tdworld.com/smart_grid_automation/doe-smart-grid-storage-funding-1109/

3. **AEE Announces AEE Market Research www.aeemarketresearch.org** - A series of market research reports supporting market development and strategic planning for those engaged in the energy business. These reports provide market assessments and forecasts, identification of market opportunities, discussions of trends, profiles of key players, and the most current market data.

4. **Green Building Boosts U.S. Economy** - Green building will support 7.9 million U.S. jobs and push \$554 billion into the American economy, including \$396 billion in wages, from 2009 to 2013, according to a study from the U.S. Green Building Council and Booz Allen Hamilton. The study also found that green construction spending currently supports more than 2 million American jobs and generates more than \$100 billion in gross domestic product and wages. 11/13 HCN <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1954>

5. **LED Bulbs Save Substantial Energy, a Study Finds** - The study results conducted by Osram show that over the entire life of the bulb — from manufacturing to disposal — the energy used for incandescent bulbs is almost five times that used for compact fluorescents and LED lamps. The energy used during the manufacturing phase of all lamps is insignificant — less than 2 percent of the total. Given that both compact fluorescents and LEDs use about 20 percent of the electricity needed to create the same amount of light as a standard incandescent, both lighting technologies put incandescents to shame. 11/30 NY Times

6. **DOE Publishes Detailed Results from Round 9 of CALIPER Testing** - The U.S. Department of Energy (DOE) has published the detailed test reports from Round 9 of product testing conducted through the DOE Solid-State Lighting (SSL) CALIPER program. Detailed results from Round 9, covering recessed downlights, linear replacement lamps, smaller replacement lamps, and a desk lamp, are now available through the online CALIPER system: www.ssl.energy.gov/search.html

7. DOE Publishes the Latest Round of LED Test Results - The Commercially Available LED Product Evaluation and Reporting (CALiPER) program (<http://www1.eere.energy.gov/buildings/ssl/caliper.html>) is available which provides an ongoing series of "snapshots" of solid-state lighting (SSL) technology progress and trends. The Round 9 Summary Report (http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/caliper_round-9_summary.pdf) includes test results for recessed downlights, 2'x2' troffers and flat-panel luminaires, 4' linear replacement lamps, and small replacement lamps. Just as in previous rounds of testing, Round 9 products exhibited a wide range of performance, with a number of underperforming products and inaccurate performance claims. Most notably, the results for CALiPER Round 9 show that for applications like downlights and 2'x2' troffers, many SSL products are now clearly competitive with incumbent technologies. Postings from Jim Brodrick postings@lightingfacts.com

8. DOE Releases GATEWAY Report on LED Freezer Case Lighting - The DOE has published the final report from a demonstration retrofit of light-emitting diode (LED) freezer case lighting in an Albertsons Grocery store in Eugene, Oregon. This GATEWAY demonstration report provides an overview of project results including lighting performance, economic performance, and potential energy savings. The report is available for download at www.ssl.energy.gov/gatewaydemos_results.html To learn more about the DOE GATEWAY program: www.ssl.energy.gov/gatewaydemos.html

9. Small Replacement Lamps Tested in Caliper Round 9 Showed a Wide Range of Results - That's why it's so important to know how to evaluate LED replacements for incandescent lamps and compare them to the incumbent products. To help people do just that, DOE recently added a new technology fact sheet, LED Replacements for Incandescent Omnidirectional Lamps, http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/led_replacements.pdf to its ever-growing library of online resources. Based on DOE CALiPER benchmark testing and analysis of manufacturer data, it notes that the light output of these replacement products has been steadily increasing and, in some cases, now rivals that of 40W incandescent lamps, and that their luminous efficacy is as much as five times greater than their incandescent counterparts. But it also draws attention to a number of red-flag issues, including huge variability in performance, unreliable manufacturer claims, poor color quality, variations in light output and distribution, high initial cost, and incompatible form factors. Postings from Jim Brodrick postings@lightingfacts.com

10. Finding the Right Template by Craig DiLouie - Earlier this year, the US Department of Energy (DOE) launched Commercial Lighting Solutions, an interactive Web tool that provides lighting templates, supported by construction documents, that can help commercial building owners achieve desirable lighting quality while improving lighting efficiency by at least 30 percent over the ASHRAE 90.1-2004 energy standard. Part of DOE's Commercial Building Energy Alliances—private-public forums aimed at significantly reducing energy use in various vertical building markets—Commercial Lighting Solutions seeks to stimulate adoption of advanced lighting technologies and design practices by making them available to anyone who specifies lighting, such as electrical contractors, designers, owners, distributors and other industry professionals. 11/09 <http://www.ecmag.com/?fa=article&articleID=10848>

11. LED Controls: 15 Examples of LED Lighting Control in Action Edited by Craig DiLouie - This whitepaper explores 15 examples of LED lighting in application, with a brief description of the controls strategy used to achieve the desired results.

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| #1. Freezer Case | #9. Special Effects |
| #2. Infrastructure Effect Lighting | #10. Outdoor Facade Lighting |
| #3. General Lighting with Conventional Control | #11. Facade Textured Effects |
| #4. Colorful Residential Lighting | #12. Workstation Lighting |
| #5. Facade Branding and Display Effects | #13. Commercial Interiors |
| #6. Theatrical House Side Lighting | #14. Video Effects |
| #7. Daylight Control | #15. White Light Tuning |
| #8. Integrated Display and General Illumination | |

http://www.aboutlightingcontrols.org/education/papers/2009/2009_LED_controls.shtml

12. Emerging Lighting Technologies and Global Market (2009-2014) - The global emerging lighting technologies market is expected to be worth US\$109.2 billion by 2014, growing at an estimated CAGR of 8.1% from 2009 to 2014. Fluorescent lighting forms the largest market segment; and is expected to reach US\$82.6 billion by 2014 at a CAGR of 7.9% for the same period. North America is the largest emerging lighting market; and is expected to be worth US\$42.8 billion by 2014, accounting for nearly 39% of the total revenues. Europe is the second largest segment and is expected to reach US\$36.9 billion by 2014. However, Asia is the fastest growing market and is poised for a high growth of 8.9% for the next five years. This report aims to identify and analyze emerging lighting products according to product, application, and technology. The report provides in-depth market estimates and forecasts for global emerging lighting markets and can be ordered at: http://www.researchandmarkets.com/product/2cbb40/emerging_lighting_technologies_and_global_mar

13. Construction Market Forecast Calls for 11% Jump in 2010 - Gains in housing and public works will offset declines in commercial and manufacturing building — that was the big news coming out of McGraw-Hill Construction's 71st annual Outlook 2010 Executive Conference held in mid-October in Washington, D.C. In its "2010 Construction Outlook," McGraw Hill analysts forecast an increase in overall U.S. construction starts for next year. Due to improvement for housing from extremely low levels and broader expansion for public works, the level of construction starts in 2010 is expected to climb 11% to \$466.2 billion, following the 25% decline predicted for 2009. 11/09 http://ecmweb.com/market_trends/construction-market-forecast-20091109/

14. Recovery Through Retrofit - By implementing the Recovery Through Retrofit Report recommendations, the Federal Government will lay the groundwork for a self-sustaining home energy efficiency retrofit industry. This Report provides a roadmap of how the Federal Government can use existing authorities and funds to unlock private capital and mobilize our communities. http://www.whitehouse.gov/assets/documents/Recovery_Through_Retrofit_Final_Report.pdf

15. Appliance Rebate Program a Mixed Blessing, Says NPD - The major appliance market is looking to the Energy Star Efficient Appliance Rebate Program to boost falling sales, but timing and a lack of consistency from state to state may be an issue, according to Mark Delaney, NPD Group's <http://www.npd.com> point person on major appliances and home improvement. Delaney told HCN that the launching of the program, which is set to begin sometime between early December and January, the heart of the holiday season, might be a hindrance. He said that the program will be difficult for national retailers to assess, since the parameters, rebate allotments, as well as what makes/models will qualify will vary from state to state. 11/12 HCN

16. Climate Bill Stalled for Now - The Senate has now made it clear that there will be no action on climate change in this session. The bill that had managed to work through the House will not be taken up by the Senate until sometime next year and given the political realities of an election year, the bill stands little chance of seeing the light of day. Many of the Democrats from industrial states were opposed as they did not appreciate the pressure it would be putting on their business community. The potential loss of jobs would be significant and in areas that can ill afford any more losses. The opposition in the Senate is even more aggressive and it looks certain that any version of the bill will be dramatically altered. <http://www.strategic-briefs.com>

17. Proposed Rules FTC16 CFR Part 305 (RIN 3084-AB03) Appliance Labeling Rule - Notice of proposed rulemaking; request for public comment. Written comments must be received on or before December 28, 2009. SUMMARY: Section 321 of the Energy Independence and Security Act of 2007 requires the Commission to conduct a rulemaking to consider the effectiveness of current labeling requirements for lamps (commonly referred to as "lightbulbs") and to consider alternative labeling approaches. After reviewing public comments and consumer research, the Commission seeks comments on proposed changes to the existing labeling requirements for lamp products. The Notice of Proposed Rulemaking for this new label may be found at <http://edocket.access.gpo.gov/2009/pdf/E9-27036.pdf>

18. **DOE to Fund Innovative OLED Lighting Developed by DuPont** - DuPont has been awarded a \$2.25 million grant for a two-year project to develop a solid-state lighting (SSL) source using low-cost OLED solution-processing manufacturing techniques. 11/25 EC&M

STATE ENERGY ISSUES TO WATCH:

19. **Utilities Unite to Offer Energy Saving Incentives** - Eleven Michigan utilities have joined together under the Michigan Public Service Commission to form Efficiency United, a consortium introducing energy optimization programs and incentives to their subscribers. The utilities include Alpena Power, Bayfield Electric Cooperative, Daggett Electric Department, Edison Sault Electric Company, Indiana Michigan Power, Xcel Energy, Upper Peninsula Power Company, WE Energies, Wisconsin Public Service Corp., Michigan Gas Utilities, and SEMCO Energy Gas Company. Programs include an Energy Efficiency Assistance Program which includes installation of energy-efficient measures for income-qualified subscribers, an online home energy audit, a residential HVAC rebate program, and a program to assist commercial and industrial customers to install energy-efficient equipment. For qualifying customers, rebates are available on items such as "smart strips," CFL bulbs, washers and water heaters. These programs are in addition to the federal tax incentive programs currently running. www.encyunited.com 11/30 PRNewswire

20. **National Grid Wants to Triple Energy Efficiency Programs** - National Grid submitted a proposal to the Massachusetts Department of Public Utilities to expand its energy efficiency programs by a factor of three between 2010 and 2012. The energy retailer says that its plan would reduce energy use 2 percent by 2012 and help customers save \$2 billion over the life of energy efficiency measures that are implemented. National Grid wants to expand its electricity energy efficiency programs from the current \$85 million to about \$570 million in the three-year period between 2010 and 2012. Natural gas energy efficiency programs would go from \$20 million now to nearly \$200 million over those three years. To support the programs, the typical residential customer using 500 kWh per month would see a \$1.15 monthly increase, while natural gas customers using 82 therms a month would see a monthly hike of \$3.25. 11/10 Environmental Leader

21. **Saint Peter's College NJ to be Powered by 100 Percent Renewable Energy** - Effective beginning January 1, 2010, the electricity purchased for all buildings on the Saint Peter's College Jersey City, NJ campus will be 100 percent renewable energy for a minimum of one year. ConEdison Solutions of White Plains, N.Y., will supply the Jersey City campus with clean and renewable wind power. In addition to working with ConEdison Solutions on its renewable supply, Saint Peter's also worked with R3 Energy of Tarrytown, N.Y., an advisor on intelligent energy efficiency and renewable energy solutions to various institutions. <http://www.sustainablefacility.com>

22. **Central Hudson Offers Energy Efficiency Incentives to Mid-sized Businesses** - Mid-sized businesses in the Hudson Valley may now qualify for the Central Hudson, Poughkeepsie, NY SavingsCentral energy efficiency programs. Mid-sized businesses with monthly electric demands between 100 and 350 kilowatts, which typically include many hotels and motels, restaurants, grocery stores, colleges and larger municipal facilities, are eligible. Eligible businesses will receive an on-site energy assessment of their facilities at no charge, and are provided a report outlining suggested electric energy efficiency improvements, such as lighting and motor upgrades; high-efficiency electric heating and cooling systems, including ground-source heat pumps; and other custom measures. The \$2.4 million Mid-Size Business Program is funded by the Systems Benefit Charge through 2011, and is projected to save more than 5,500 megawatt-hours of electricity. To learn more about available programs: www.SavingsCentral.com

23. Con Edson Gets Another \$45M In Stimulus Money - Consolidated Edison Inc. said Wednesday it will get another \$45 million in federal stimulus money to improve the electricity grid in the New York area. The money is in addition to the \$136 million in stimulus funds Con Ed said it was awarded in October. The grant from the U.S. Department of Energy will be used to test and develop technologies to create a "smart grid" that uses computers and communication technology to optimize how electricity is generated, transmitted, distributed and used. 11/25 AP

24. Governor Rendell Announces \$22 Million Investment In Energy Conservation Projects - Conservation Works! is a \$22 million competitive grant program, funded through the ARRA Act, to help local government and non-profit organizations improve energy efficiency, curb energy consumption and reduce energy costs by at least 25 percent. Conservation Works! provides grants of up to \$250,000 to individual local government and non-profit entities and \$500,000 for combined government projects to conserve or reduce energy use. The program covers Pennsylvania boroughs, townships and cities with fewer than 35,000 residents and counties with fewer than 200,000 residents, municipalities not eligible for direct formula grants from the Energy Efficiency and Conservation Block Grant program. More than \$15.3 million will be distributed to local governments, with the remainder going to non-profit organizations. All projects must create jobs, be able to start work within six months and be completed prior to May 31, 2011. www.recovery.pa.gov

25. Baltimore Stadiums to Become More Energy Efficient - Maryland's Board of Public Works approved \$12.2 million on Wednesday to make M&T Bank Stadium and Oriole Park at Camden Yards more energy efficient. The stadiums and warehouse office building will get high-efficiency light bulbs. Heating, cooling, sewer and air conditioning systems will be retrofitted. 11/20 AP

26. Dominion Virginia Power CFL Bulb Instant Discount Program Saves Enough Energy Thus Far to Power 72,000 Homes - Dominion estimates the nearly 3.8 million CFLs have been purchased through the program since October 2007. Dominion provides a \$1.50 discount on an ENERGY STAR® -qualified CFL bulb and \$3 on multi-packs purchased at The Home Depot stores in its Virginia service area.

http://www.dom.com/about/av-clips/2009/cfl_program.jpg

The current program will end Dec. 31 but Dominion is planning an expanded CFL program next year as part of its energy conservation plan pending before the Virginia State Corporation Commission. Additional information on Dominion's CFL discount program is available by visiting the company's Web site at www.dom.com and searching for "CFL".

27. LED Lighting Brightens Holiday Season with Energy Savings - Through sponsorship of a lighting exchange at Lincoln Park Zoo and a number of festivals across northern Illinois, ComEd is encouraging customers to adopt energy-saving habits that help them save money. LED holiday lights can pay for themselves in four to five years as a result of electricity savings and use up to 90 percent less energy than traditional light strands. ComEd hosted an energy efficient holiday lighting exchange on Nov. 27 at Lincoln Park Zoo's annual ZooLights festival. In addition to the LED lighting exchange and discounts, ComEd continues its tradition of hosting local holiday festivals for families to enjoy including:

- ComEd Festival of Trees at the historic Rialto Theater in Joliet www.rialtosquare.com
- Chicago Botanic Garden's Wonderland Express www.chicagobotanic.org
- Brookfield Zoo's Holiday Magic www.comed.com

ComEd's environmental initiatives are part of parent company Exelon to reduce, offset, or displace more than 15 million metric tons of greenhouse gas emissions per year by 2020. 11/25 PRNewswire

28. UK Plans to Save Big Bucks on Energy - The University of Kentucky approved a \$25 million energy savings performance contract Tuesday by the school's Board of Trustees. UK has contracted with Ameresco, a Louisville-based energy service company, to do the work. Under the guidelines of a state law that allows such contracts, the company guarantees that the project will pay for itself in a dozen years. If it doesn't, the company, not the university, is responsible for the difference. 12/01 The Lexington Herald-Leader

29. **Kansas Launching Energy Efficiency Loan Program** - Kansas officials are preparing to launch an energy efficiency loan program financed with federal stimulus dollars. The State Energy Office will administer the program, which will use \$34 million in federal funds to make low-cost loans to homeowners and small businesses. The loans are to be used to make energy efficiency improvements. 11/13 AP

30. **OG&E Officials Resist Using LED Streetlights Downtown** - Officials with Oklahoma Gas & Electric helped introduce Oklahoma City to LED lighting a couple of years ago with the installation of LED lights along the Oklahoma River and as replacement Christmas lights at the Myriad Gardens. But the utility is reluctant to see LED streetlights introduced downtown. Tim Hartley, spokesman for OG&E, estimates the cost of an LED light at \$2,000 per fixture compared with \$200 for the fixtures used today. "The technology in play here with LED lights is not proven and doesn't have a track record with streetlight use," Hartley said. 11/08 The Daily Oklahoman

31. **Marriott, TXU Energy Ink Green Deal** - More than 40 Marriott hotels throughout Texas are doing their part to help the Texas environment. TXU Energy recently conducted energy audits at several large Marriott properties in the state. The audits were part of Marriott extending its electric service agreement with TXU Energy through 2013. Recommendations in the audits included upgrading control systems and switching out CFL bulbs. Each recommendation has the potential to save money even beyond the term of the electric service agreement. In addition, once energy efficiency measures are implemented, the hotel chain will receive rebates under TXU Energy's Energy Efficiency Rebate Program. 11/16 BUSINESS WIRE

32. **Xcel's "Lights Out Lunch" Offers Perks** - Energy is asking people to turn out their lights at lunch Dec. 11. While the "Lights Out Lunch" statewide program is designed to promote energy efficiency and the purchase of compact fluorescent bulbs, it also comes with dining perks. Those who sign up for the noon to 1 p.m. blackout will receive a discount coupon good for lunch that day at participating restaurants. 11/17 Denver Post

33. **Reno Arch Going Green with LED Bulbs** - City officials will hold a ceremony Tuesday to mark the replacement of the downtown landmark's incandescent bulbs with more energy efficient LED bulbs. The arch, which proclaims Reno, NV as "The Biggest Little City in the World," has 2,076 incandescent bulbs. The project is part of the city's \$20 million energy efficiency and renewable energy initiative. 11/13 AP

34. **Audit: Calif. Slow to Spend Energy-Saving Stimulus** - A new audit says the California Energy Commission isn't moving quickly enough to spend \$40 million in federal stimulus money for energy-related projects. In a report issued Tuesday, state Auditor Elaine Howle says the commission has not spent any of the money, even though it has reached deals with other state agencies to retrofit government buildings and provide green job training. Howle warns that the commission also lacks internal controls to track the money. 12/01 AP

SPECIAL MONTHLY FEATURE:

Smart Grid - <http://www.oe.energy.gov/smartgrid.htm>

The 2009 Stimulus Package Has Reserved \$4.5 Billion for Smart Grid Spending - The electric grid delivers electricity from points of generation to consumers, and the electricity delivery network functions via two primary systems: the transmission system and the distribution system. The transmission system delivers electricity from power plants to distribution substations, while the distribution system delivers electricity from distribution substations to consumers. The grid also encompasses myriads of local area networks that use distributed energy resources to serve local loads and/or to meet specific application requirements for remote power, village or district power, premium power, and critical loads protection.

" [The Smart Grid: An Introduction](#)" is a publication sponsored by DOE's Office of Electricity Delivery and Energy Reliability that explores - in layman's terms - the nature, challenges, opportunities and necessity of Smart Grid implementation. Additional books, released in 2009, target the interests of specific stakeholder groups: [Consumer Advocates](#), [Utilities](#), [Technology Providers](#), [Regulators](#), [Policy Makers](#) and [Environmental Groups](#), to explain in greater detail what the Smart Grid will mean to us.

DOE is conducting a series of [Smart Grid E-Forums](#) to discuss various issues surrounding Smart Grid including costs, benefits, value proposition to consumers, implementation, and deployment.

The [Federal Smart Grid Task Force](#) was recently established under Title XIII of the Energy Independence and Security Act of 2007 to coordinate smart grid activities across the Federal government.

[Grid 2030 vision](#) (PDF 1.1 MB) calls for the construction of a 21st century electric system that connects everyone to abundant, affordable, clean, efficient, and reliable electric power anytime, anywhere. We can achieve this through a smart grid, which would integrate advanced functions into the nation's electric grid to enhance reliability, efficiency, and security, and would also contribute to the [climate change strategic goal of reducing carbon emissions](#). These advancements will be achieved by modernizing the electric grid with information-age technologies, such as microprocessors, communications, advanced computing, and information technologies.

Electric grid stakeholders representing utilities, technology providers, researchers, policymakers, and consumers have worked together to define the functions of a smart grid. Through regional meetings convened under the [Modern Grid Strategy](#) project of the National Energy Technology Laboratory (NETL), these stakeholders have identified the following characteristics or performance features of a smart grid:

- Self-healing from power disturbance events
- Enabling active participation by consumers in demand response
- Operating resiliently against physical and cyber attack
- Providing power quality for 21st century needs
- Accommodating all generation and storage options
- Enabling new products, services, and markets
- Optimizing assets and operating efficiently