



Green Newsletter  
August 2008

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## California Approves Green Building Standards

The California Building Standards Commission, the agency that oversees the adoption and implementation of the State's building code, voted unanimously on July 17 to adopt the first statewide "green" building code in the nation.

The code, which applies to all new construction in the state, will be implemented as guidelines on July 1, 2009. It will become mandatory in 2010, the adjustment period allowing industry and local enforcement agencies time to prepare and comply with the new standards.

Though the building codes are meant as the minimum acceptable level, the green standards will certainly raise the bar in a state that already boasts the toughest building code in the nation.

The code aims to cut energy use by 15 percent by addressing a multitude of issues: building envelope; air sealing package; HVAC and water heating design, equipment, and installation; lighting; appliances; energy efficient framing.

Suffering from a prolonged drought, California is well aware of the importance of water conservation. The green standards will look to cut indoor water use by 20 percent through efficient plumbing fixtures and fittings and efficient appliances. Potable water in outdoor use will be reduced by 50 percent through the establishment of a water budget, efficient landscape irrigation, and the use of rainwater, recycled water and grey water.

The new standards also address on-site renewable energy use, green building materials, indoor air quality, and other design considerations.

"By adopting this first-in-the-nation statewide green building code, California is again leading the way to fight climate change and protect the environment," said Governor Arnold Schwarzenegger. This is literally a groundbreaking move to ensure that when we break ground on all new buildings in the Golden State we are promoting green building and energy efficient new technologies."

For more information, visit: [http://www.bsc.ca.gov/prpsd\\_std/default.htm](http://www.bsc.ca.gov/prpsd_std/default.htm)

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## PLUMBERS



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### House Approves Water Efficiency Bill

On July 30, the U.S. House of Representatives passed the Water-Use Efficiency and Conservation Research Act (HR 3957).

Introduced by Rep. Jim Matheson, D-Utah, HR 3957 will increase research, development, education, and technology transfer activities related to water use efficiency and conservation technologies and practices at the Environmental Protection Agency.

The program would promote water-use efficiency and conservation through (1) technologies and processes that enable the collection, storage, treatment, and reuse of rainwater, stormwater, and greywater; (2) water storage and distribution systems; (3) behavioral, social, and economic barriers to achieving greater water use efficiency; and (4) use of watershed planning directed toward water quality, conservation, and supply. The plan will also seek to improve existing processes and technologies, including wastewater treatment, desalination, and groundwater recharge and recovery schemes.

"Thirty six states are anticipating local, regional, or statewide water shortages by 2013. As the West continues to grow, we must face the problem of continually increasing the demands on a finite water supply," said Matheson.

The Water Use Efficiency and Conservation Research Act has been sent to the Senate for approval.

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### Green Building Programs Growing

Green building is flourishing at an impressive rate, according to a study by Brooks Rainwater, director of local relations for the American Institute of Architects (AIA). The report, "Local Leaders in Sustainability," found that 14 percent of U.S. cities with populations of more than 50,000 have green building programs in place, while many others are following suit.

The report examines green building programs in our nation's communities, and takes a look at what policies are effective in relation to their regional and political climate. Portland, San Francisco, Scottsdale, Chicago, Austin, and Atlanta were used as case studies to illustrate the best practices of green programs.

Success of green building is accredited to the leadership of local government officials and the involvement of citizens in the community.

The report can be found at [http://www.aia.org/adv\\_localleaders](http://www.aia.org/adv_localleaders)

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### Energy Star Benchmarking in DC

Buildings in the District of Columbia will soon need to measure and post their Energy Star Rating on an annual basis. The benchmark requirement is part of the Clean and Affordable Energy Act of 2008 passed by the DC Council last month.

Beginning in 2010, the act would require all commercial buildings to calculate their efficiency score using free online tools provided by the Energy Star program. The program would be



phased in slowly, beginning with buildings 200,000 sq. ft. or more reporting in 2010. Each year the size requirement will drop by 50,000 sq. ft. until 2013, when all buildings over 50,000 sq. ft. will be required to post their Energy Star rating.

Energy Star scores are calculated based on building size, hours of operation, the number of employees and computers, and 12 consecutive months of utility bills.

The bill also increases the requirements for utilities to offer renewable energy, increases the city's funding for solar generation projects to \$2 million, and creates a third party sustainable energy utility to operate energy efficiency and renewable energy programs in DC.

DC Mayor Adrian Fenty is expected to sign off on the bill within the coming month.

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### **Green Building Regulations Challenged in Court**

The Air Conditioning, Heating and Refrigeration Institute (AHRI), the Air Conditioning Contractors of America (ACCA), the Heating, Air-conditioning, & Refrigeration Distributors International (HARDI), and 11 HVAC product distributors and contractors have filed a federal lawsuit seeking to block Albuquerque's new green building legislation.

The city's recently passed Energy Conservation Code establishes stricter requirements for several appliances, including 90 percent AFUE for furnaces and 15 SEER for air conditioners. (The current federal standard is 13 SEER and 78% AFUE)

The 35-page lawsuit maintains that the Energy Policy and Conservation Act of 1975 and other federal laws preempt any local regulations, unless the city has a waiver from the U.S. Department of Energy.

The associations contend that the codes will strip consumers of choice, significantly drive up cost, and create a black market for the installation of cheaper, less efficient equipment from unlicensed contractors. If the city is allowed to proceed, other cities and states could follow suit, causing confusion as to what standards must be followed.

The associations have been working with the city since the legislation was signed back in January, but no progress has been made.

The ruling is likely to have a significant impact on the green building movement, and could set a national precedent for local legislation to be challenged more extensively.

Implementation of the new standards was supposed to take effect April 1, 2008, but the city has postponed enforcement until October.

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### **His Royal Highness Prince Feisal Ibn Al-Hussein of Jordan to Deliver Opening Session Keynote Address at Inaugural WaterSmart Innovations Conference and Exposition**

#### ***Brother of King Abdullah II Chairman of Royal Water Committee***

His Royal Highness Prince Feisal Ibn Al-Hussein of Jordan, who as a chairman of the Royal Water Committee is active in water resource management and alternative water resources, will be the keynote opening session speaker at the inaugural WaterSmart Innovations Conference and Exposition, Oct. 8-10, 2008, in Las Vegas.

Presented by the Southern Nevada Water Authority (SNWA) in conjunction with the U.S. Environmental Protection Agency's (EPA) WaterSense Program, WaterSmart Innovations

will serve to broaden the knowledge of innovations in urban water efficiency and water conservation including products, programs and outreach. It is anticipated to be the largest and most comprehensive conference of its kind. More information is available at <http://www.watersmartinnovations.com>.

Slated to speak at the conference's opening session October 8, HRH Prince Feisal chairs the water committee that his brother, King Abdullah II, created earlier this year to upgrade Jordan's water strategy and develop policies and programs in light of the kingdom's scarce water resources.

A recent World Bank report noted that Jordan is one of the world's 10 most water-deprived nations. According to the United States Agency for International Development, the average Jordanian has access to fewer than 150 cubic meters of water, or less than 40,000 gallons annually. In contrast, the average U.S. citizen has more than 9,000 cubic meters, or about 2.4 million gallons, of fresh water available per year. Exacerbating Jordan's water challenges is its growing population, expected to double by 2029.

At a meeting in April, His Royal Highness urged the Royal Water Committee to develop a comprehensive national water strategy focusing on water resource management, alternative sources and sewage system management.

In addition to his commitment to efficient use of Jordan's limited water resources, HRH Prince Feisal is head of the Jordanian Olympic Committee and serves as a Lieutenant General in the Royal Jordanian Air Force. He graduated from Brown University in Providence, R.I., in 1985 with a degree in electrical engineering, and has been a supervisor and advisor to Royal Wings Airlines, a regional subsidiary of Royal Jordanian Airlines, since 1995.

WaterSmart Innovations will be held at the South Point Hotel and Casino, at the south end of the famed Las Vegas Strip. Full conference registration of \$390 is available through the conference's Web site, [www.WaterSmartInnovations.com](http://www.WaterSmartInnovations.com) <<http://www.watersmartinnovations.com>> .

Other organizations collaborating with the SNWA and the EPA on WaterSmart Innovations include the Alliance for Water Efficiency, California Urban Water Conservation Council, the California-Nevada Section of the American Water Works Association, Irrigation Association, American Society of Irrigation Consultants, Audubon International, the International Association of Plumbing and Mechanical Officials and the International Center for Water Technology.

Major commercial conference sponsors include Rain Bird Corp., Caroma USA, MWH Americas, Inc., TOTO USA, Inc., the National Association of Home Builders, AECOM, Inc., Ewing Irrigation, Black & Veatch, Global Water, Hunter Industries, Inc., the Springs Preserve and Water Management, Inc.

For more information, visit <http://www.watersmartinnovations.com> .

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### **BLM Lifts Solar Moratorium**

After weeks of public outcry and political pressure, the U.S. Bureau of Land Management (BLM) has announced a reversal of its moratorium on solar applications.

"We heard the concerns expressed during the scoping period about waiting to consider new applications," said BLM Director James Caswell, "and we are taking action. By continuing to accept and process new applications for solar energy projects, we will aggressively help meet growing interest in renewable energy sources, while ensuring environmental protections."

BLM had announced it would suspend acceptance of new solar applications pending the completion of a two-year Programmatic Environmental Impact Statement (PEIS) aimed at assessing the broad environmental impact large solar power plants could have on wildlife, vegetation and water supply. Though each project has to go through an environmental study, the agency has been inundated with 125 applications requesting the use of public land. BLM hopes that by conducting a wider study, they will establish criteria that will streamline the process.

The solar industry, already impatient with the BLM's pace in reviewing applications, worried that the hold on new applications would send the wrong signal to potential investors, and stunt the growth of the solar industry.

The BLM's reversal was welcome news, though the industry still faces another significant hurdle. Congress has yet to extend the alternative energy tax credits set to expire at the end of the year.

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### **Comment Period Extended for WaterSense Homes**

WaterSense has extended the public comment period for the draft specification for single-family new homes an additional 45 days. The new public comment period will end on September 4, 2008. Please send any comments or suggestions regarding this draft specification to [watersense-newhomes@erg.com](mailto:watersense-newhomes@erg.com). (Please note that all comments become part of the public record.)

The draft specification for water-efficient single-family new homes provides the criteria new homes will need to meet to be certified and labeled under the WaterSense program. The specification is designed to ensure not only sustainable, efficient water use but also a high level of user performance satisfaction. WaterSense labeled new homes will combine WaterSense labeled products with other water-efficient fixtures and practices to reduce the amount of water used by approximately 20 percent. Homes must meet criteria in three areas: in-door water use, outdoor water use and homeowner education. Third-party inspectors will certify that homes meet all of the required criteria. Homes meeting all the criteria will be given a WaterSense label.

If you have questions about the draft specification for water-efficient single-family new homes or joining WaterSense, please contact the WaterSense Helpline at (866) WTR-SENS (987-7367) or e-mail [watersense@erg.com](mailto:watersense@erg.com). WaterSense Helpline Staffed by ERG (Contractor to U.S. EPA) (866) WTR-SENS (987-7367) [www.epa.gov/watersense](http://www.epa.gov/watersense)

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### **EPA Works with Builders On WaterSense New Homes Program**

As part of its efforts to encourage water efficiency across the country, the U.S. Environmental Protection Agency (EPA) announced that five builders will participate in the Water-Efficient Single-Family New Homes Pilot Program. The builders will construct homes designed to meet the WaterSense program's draft specification for new homes.

"Building green means saving green and blue," said Benjamin H. Grumbles, EPA's assistant administrator for water. "Water-efficient homes are the wave of the future; they save water, energy, and money, and that makes sense for families seeking high-performing housing."

Five innovative builders are joining EPA in the "blue wave" by committing to build and certify a total of 35 to 50 homes by 2009 in various regions of the country:

Anderson Homes; Raleigh and Chapel Hill, N.C.

Aspen Homes of Colorado; Windsor, Colo.

Cleantech Homes; Beverly, Mass.

Dorn Homes; Tubac, Ariz.

Tim O'Brien Homes, Inc.; Waukesha, Wis.

In addition to demonstrating the benefits of WaterSense labeled products, other water-efficient fixtures and design features, outdoor water systems designed for efficiency, and Energy Star qualified appliances, the builders will help EPA test the process for inspecting and certifying new homes to receive the WaterSense label. EPA expects builders to complete homes to the draft specification and report on the results of the WaterSense New Homes Pilot Program in early 2009. Results will shape the final Water-Efficient Single-Family New Homes Program.

More information about the specification: <http://www.epa.gov/watersense>

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### **Seattle Forms Green Building Task Force**

Seattle has assembled a Green Building Task Force to help the city achieve its goal of making Seattle America's Green Building Capital.

Three years ago, Mayor Nickels pledged that Seattle would reduce community greenhouse gas emissions to 7 percent below 1990 levels by 2012, and in the long term, reduce emissions to 80 percent below 1990 levels by 2050.

There is tremendous opportunity for greenhouse gas emission reductions by increasing energy efficiency in public and private, residential and commercial buildings. As part of his 2008 State of the City address, the Mayor identified an initial target of achieving an increase of 20% in the energy efficiency of Seattle's new and existing buildings.

The Green Building Task Force will provide guidance on appropriate policy mechanisms that the City can employ to achieve these goals. The task force will be comprised of representatives from real estate professionals, building operators, green building experts, low-income housing providers and advocates, historic preservation advocates, energy suppliers, financial institutions and other interested parties.

"I am very pleased to have some of Seattle's best and brightest joining me to create the roadmap for Seattle's green building future," Nickels said in a news release. "Seattle is very fortunate to have a 30-year history of energy conservation, but with the challenge of climate disruption, there is a lot more we can do to make Seattle the nation's energy efficiency leader."

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### **How Energy Efficient is Your State?**

Maine is at the top of the list, according to a recent study by Jerry Jackson, energy economist and Texas A&M University professor. His paper, State-Level Office Energy Efficiency Rankings, measures the percentage of office buildings that exceed the EPA's Energy Star Standard and provides the first quantitative amount of state level cost savings. The report finds that economic incentives created by high electricity prices are a major factor in the move towards energy efficiency. It also shows the huge potential that has yet to be realized.

Top Ten States	% Exceeding EnergyStar Standard	% Cost Savings
ME	41.70	29.9
MA	40.07	27.8
NH	37.77	24.9
VT	37.72	24.1
NV	35.57	22.2
NY	33.27	18.9
CA	33.22	19.2
CT	33.17	19.0
RI	33.13	19.4
NJ	32.64	19.1

The full report can be viewed at: <http://energybudgetsatrisk.com/effic.htm>

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### **ARCSA Offering Rainwater Harvesting Workshop**

Californians interested in finding ways to voluntarily meet the state's new green building code, specifically in the area of water conservation and storm water management, are encouraged to attend an upcoming workshop and conference on rainwater harvesting in Santa Monica.

The American Rainwater Catchment Systems Association (ARCSA) is offering a one-day workshop on the basics of rainwater harvesting for \$50.00 on Monday, September 15. A free open house for the general public will also be held from 4 to 7 p.m. that day.

More detailed information on how to design a rainwater catchment system, how to filter and disinfect the water, new options for gutters, pipes, and water storage, along with how such systems may be recognized under the U.S. Green Building Council's LEED® program will be presented during the association's national conference from Tuesday, September 16, through Thursday, September 18. All events will be held at the Sheraton Delfina Hotel, 530 W. Pico Blvd.

"With California's drought, and now the new statewide building standards that encourage rainwater harvesting, we want everyone to know how easy it is to save the rain," said ARCSA president Tim Pope of Friday Harbor, Washington. "Whether you're constructing a large commercial building, or you just want to water your plants without facing an enormous water bill, rainwater harvesting is such a simple solution."

Sections 604 of the California Green Building Standards Code, adopted in mid-July by the California Building Standards Commission, identifies captured rainwater as one of several ways to meet the goal of outdoor water conservation by providing "water efficient landscape irrigation design that reduces by 50% the use of potable water beyond the initial requirements for plant installation and establishment," or as a way to eventually eliminate the use of tap water on landscapes.

ARCSA is a non-profit association dedicated to educating the public on the benefits of rainwater harvesting, while ensuring professional standards for the installation of collection systems. ARCSA members include: professionals, such as architects, home builders, landscape designers, roofing contractors, and plumbers; employees of water supply utilities

and state, local and federal regulatory agencies; representatives of companies that manufacture products needed to build rainwater harvesting systems; and "do-it-yourself" homeowners and environmentalists who are seeking ways to conserve precious water resources.

For more information, including a conference program and online registration, see [www.ARCSA.org](http://www.ARCSA.org).

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### Storing Solar Energy

Homes with solar installations generally feed energy to the grid when the sun is up, but draw energy when the sun goes down, limiting the amount of time it can produce energy. That may change, reports Reuters, as researchers from the Massachusetts Institute of Technology (MIT) say they have designed a solar system that could generate electricity around the clock.

The technology combines solar cells with electrolyzers that make hydrogen and oxygen during the day, and recombine them at night to generate electricity.

Splitting water in the past required significant amounts of energy. But MIT's process adds a liquid catalyst to water before electrolysis, reducing the amount of energy needed by almost 90 percent.

"It's cheap, it's efficient, it's highly manufacturable, it's incredibly tolerant of impurity and it's from earth-abundant stuff," said Daniel Nocera, energy professor at MIT, in a Reuters interview.

To read the Reuters' article: <http://www.reuters.com/article/newsOne/idUSN3145191020080731?sp=true>

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Events Calendar:

**IAPMO Emerging Technology Symposium**  
August 19-20, 2008  
O'Hare Marriott  
Chicago, IL  
[www.iapmo.org](http://www.iapmo.org)

**ARCSA Annual Conference**  
September 16-18, 2008  
Santa Monica, CA  
[www.arcsa.org](http://www.arcsa.org)

**World Plumbing Conference**  
September 24-27, 2008  
Calgary, Alberta, Canada  
[www.worldplumbing.org/2008.html](http://www.worldplumbing.org/2008.html)

**79th IAPMO Annual Education & Business Conference**  
Sept. 28 - Oct. 2, 2008  
The Sheraton Atlanta  
Atlanta, Georgia  
[www.iapmo.org](http://www.iapmo.org)

**ISH North America**  
October 1-3, 2008  
The Sheraton Atlanta  
Atlanta, Georgia  
[www.usa.messefrankfurt.com](http://www.usa.messefrankfurt.com)

**126th PHCC Convention**  
September 29 - October 4, 2008  
Atlanta Marriot Marquis  
Atlanta, Georgia  
[www.phccweb.org](http://www.phccweb.org)

**WaterSmart Innovations Conference and Expo**  
October 8 -12, 2008  
Las Vegas, Nevada  
[www.watersmartinnovations.com](http://www.watersmartinnovations.com)

**2008 ASPE Convention and Engineered Plumbing Expo**  
October 25-29, 2008  
Long Beach, California  
<http://aspe.org/>

**2008 World Toilet Summit**  
November 4-6, 2008  
The Venetian Macao Resort  
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