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# GREENING NEWSLETTER

## UNDER PRESSURE; will California’s new Green Building Standards Code leave luxury hotels in hot water?

Now that California’s new Green Building Standards Code (also known as CALGreen) has officially gone into effect, many industry leaders believe the code will eventually affect the design, construction and specification of plumbing material for new hotel projects on a national level. However, questions remain about its long-term impact on business and the guest experience.

*Background:* Without question, CALGreen is complicated legislation. It requires residential and commercial developers to implement a wide range of sustainability measures in the areas of planning and design, energy efficiency, water efficiency and conservation, material conservation, resource efficiency and environmental quality. The law only affects newly-constructed residential and low-rise non-residential buildings—including hotels and motels (three stories or less). In the area of water conservation, CALGreen requires a 20% reduction in water consumption and addresses indoor and outdoor water use, as well as wastewater reduction. (This article will only be focusing on indoor water use—one of the more controversial aspects of the law.)

To demonstrate a 20% reduction in water usage, low-rise hotels in California must show a performance calculation with a combined reduction for lavatory faucets, showerheads, water closets and urinals. To achieve a 20% reduction, lavatory faucets are now at 1.5 gpm (gallons per minute), superseding the national requirement of 2.2 gpm; kitchen faucets are now 1.8 gpm, compared to 2.2 gpm nationally; and showerheads and hand showers must now be under 2.0 gpm, compared to 2.5 nationally. All must have a maximum allowable pressure of 60 psi (pounds per square inch). Water closets are 1.28 gallons per flush, while urinals are 0.5 gallons per flush.

*Obstacles:* The problem for hotel owners begins with the showerhead requirements. Since the combined flow rate of all showerheads cannot exceed 2.2 gpm, the shower must be designed to only allow one showerhead in operation at a time. (The maximum allowable volume is 80 psi).

This portion of the law virtually eliminates volume and redefines the nature of a shower system—a problem for high-end hotels that depend on the bath suite as a way to differentiate themselves from the competition. Jeff Burton of The Bath + Beyond in San Francisco sums it up best: “You can’t go to a five-star hotel and be expected to take a two-gallon-per-minute shower when you’re paying \$500 to \$1,000 a night.”

Also, if a hotel owner retains a design firm in New York City and a contractor in California, who’s responsible for ensuring the product is compliant?

“The law is pretty clear about the requirements, but there are still many questions about responsibility,” says Tom LeDuc, a

45-year plumbing industry veteran and Certified Green Plumbers instructor who has been leading CALGreen seminars for the Decorative Plumbing & Hardware Association (DPHA). “At first, we thought it was the plumber’s responsibility since we supply the fixtures. But we quickly found out that wasn’t necessarily the case. The designer should specify the product for their project, but showroom dealers have a responsibility to educate their customer too. They need to make sure they cover themselves.” The last thing a showroom dealer wants to do is sell a luxury shower system to a hospitality specifier that doesn’t pass inspection. “Lawmakers didn’t think of how it would affect the dealers or customers,” Burton says. “We’re advising our customers to check with their local building department code on water allotment. We don’t want the responsibility of recommending shower products to designers, and then they come back to us and say, ‘You sold it to us, and it didn’t pass inspection.’”

The nearly 200-page law also has many gray areas, with some experts calling it “convoluted.” Depending on where your hotel is located in California, a local inspector may interpret the law to your advantage—or disadvantage—for the same reasons. Additionally, what constitutes residential or non-residential? Who defines what “new construction” means?

Hospitality chains that entered into master contracts for large quantities of faucets and showerheads may also be concerned about using their existing inventory. Rather than keep separate stock for California, they will eventually need to make the switch to plumbing product that meet the strictest standards for all of their properties.

However, from my perspective, one of the most troubling aspects of the law is the potential watering down of the luxury bath experience. The exclusivity of that experience may be lost as more hoteliers adapt the code’s shower requirements.



Haley, a Watermark faucet, comes with a thermostatic valve option.

*Overcoming obstacles:* How can hotel owners avoid the hot water? Even if a new hotel project is not in California, plumbers, inspectors, dealers, mechanical engineers and hospitality designers should start familiarizing themselves with these codes now and establish open communication with their local building department. Since it will take some time for the requirements to trickle down nationwide, it is an opportunity for hoteliers to plan ahead. Why not begin looking for products with modern technology that are designed to meet stricter sustainability measures?

Product-wise, options include installing advanced digital shower systems with water tracking systems or replacing pressure balance valves with thermostatic valves that have built-in volume control and diverter in one. These relatively inexpensive valves not only eliminate varied volume control and reduce flow rates, but also meet CALGreen standards.

**Greener future:** CALGreen is one of the most significant pieces of water conservation legislation ever passed in the US. It's not surprising that such a major code change has created confusion and panic. The timing of CALGreen may be unfortunate with the recession, but the challenges it poses are not unlike those we have faced in the past. If anything, we can view it as an opportunity: Future hotel projects will be set up for more advanced green-rating systems like the US Green Building Council's LEED Rating System.

Abel, Avi, "Under Pressure," Lodging Magazine, November, 2011, p. 48

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## ENERGY SAVINGS

It's that time of the year again when the hospitality industry is abuzz because of one word: Numbers. Budget season is in full swing for 2012, and in meetings across the country skilled professionals are seeking ways to increase profitability and reduce costs in the year ahead. Choices are everywhere. Can we reduce our labor costs? Can we decrease our operating expenses? The answer is a simple and resounding "yes": focus on hotel energy savings.

Energy reduction technologies and strategies will reduce labor, energy and utility expenses. The cost reduction in these areas can positively affect P&L statements well into the future. A change in the way a hotel utilizes energy is one of many sustainability initiatives that can reduce wasteful spending and increase bottom-line revenue.

**Energy purchasing in deregulated markets:** In states where the monopoly system of electricity providers has been deregulated, a retail scenario has emerged with numerous competing firms that provide renewable energy options from the supply side. In these markets, competitive pricing among suppliers can provide an increased cost savings in addition to any incentives they may offer. By focusing attention on renewable energy sources, the overall carbon footprint of a single hotel can be drastically reduced. A renewable energy evaluation can provide solutions that will not only reduce your cost per kWh, but also procure your energy with a provider producing energy through a renewable source.

In markets where deregulated energy options are available,

commercial consumers of these utilities benefit from increased competitiveness and transparency. What's the bottom line? Competition is good and the savings can be substantial. Though not available in every marketplace, the options for renewable energy are increasing each year.

Perhaps the most appealing facet of energy procurement is that it has zero out-of-pocket cost. This is an easy, affordable transition that can translate into both utility cost reduction as well as your company's own sustainability initiative.

**Energy Benchmarking:** Did you know that guestroom energy usage typically exceeds 50% of the property's utility bill? Decreasing your energy usage by 10% can equate to an increase in RevPAR by 60¢ for limited-service hotels and by more than \$2 for full-service hotels. The savings are real, and they flow right to the bottom line.

In order to know where you can save resources, it is imperative to know your baseline operating costs. An Energy Benchmarking analysis allows a hotel to establish a base cost for operating essential equipment. Once established, a property has a reference that they can utilize to compare themselves to similar properties' performance levels as well as to track their own progress. Benchmarking your hotel allows owners, management companies and operators to view an energy profile of their hotels and the potential benefits that green transitions can afford them.

An energy analysis is an excellent way to identify these metrics and create a tool for measured, quantifiable data that can present areas for adjustment and potential retrofit. There are wonderful benchmarking tools for the hospitality world to utilize including: Energy Star Benchmarking, Hilton LightStay Support, IHG Green Engage Support and EPA's WasteWise.

Once a hotel has been properly benchmarked, a customized energy profile can identify potential areas for improvement and reduced energy consumption. By benchmarking annually and measuring monthly, you can see the impacts of your energy saving adjustments. A third-party energy professional can provide support to build a plan of potential improvements you can make to help reduce your overall utility expense.

**Plan your 'capital expenses':** Energy reduction technologies and strategies aren't free, but they pay for themselves in the overall savings. Planning in advance during your budgeting process can provide you with the options to see drastic expense reductions in short order. Plan for capital expenses now. By making adjustments to your property with capital dollars, you avoid impacting your operating budget and P&Ls.

Some of the most effective energy reduction technologies that you can utilize capital dollars for are:

- Occupancy-Based Guestroom Energy-Management Systems ([energy-eye.com](http://energy-eye.com), [energytechgroup.com](http://energytechgroup.com))
- Laundry Systems ([ozonelaundry.com](http://ozonelaundry.com), [continentalgirbau.com](http://continentalgirbau.com))
- Lighting Occupancy Controls, LED Lighting ([lemnislighting.com](http://lemnislighting.com), [luxld.com](http://luxld.com))
- Hot H2O Saver (Domestic Hot Water Efficiency)
- Window Film ([wscwindowfilms.com](http://wscwindowfilms.com))
- Solar Energy ([cogenra.com](http://cogenra.com), [zagerplumbingandsolar.com](http://zagerplumbingandsolar.com))
- Batteries, Door ([hospitalitybatteryholder.com](http://hospitalitybatteryholder.com))

Still using incandescent bulbs? The planned phase-out of this out-dated technology means that hotels need to plan for an appropriate retrofit. Why not plan for an overhaul?

**Rebates and Incentives:** In many areas of the country, hotels can take advantage of utility rebates and incentives. Lower

interest energy loans, hotel energy rebates and state programs with subsidies are also available to possibly offset the initial costs of an energy reducing technology. There are options available at the local, state and federal level to encourage businesses to engage in energy reducing technologies and upgrades.

**Now is the time to act:** By taking advantage of some of the new energy reducing technologies and programs now, you are investing in the future profitability of your hotel energy savings. Utility costs are among the highest expense line items at any hotel property. By engaging in a coordinated plan to reduce energy consumption, your overall bottom-line performance is bound to improve.

Parisi, Scott, "Energy Savings," Lodging Magazine, December, 2011

## HOWDY BUSCH SYSTEMS!

ALLY MEMBER Busch Systems manufactures the world's largest, most complete line of recycling, waste and compost containers. As part of their commitment to the community and the environment, they engineer their containers to use fewer natural resources and to ship far more effectively, thereby avoiding large volumes of carbon emissions. All of Busch Systems' products contain recycled content, are 100% recyclable and are proudly made in North America.



One of the biggest impediments to an effective recycling program is the trash can. Make it easy to recycle and increase recycling rates. Make sure you have recycling bins next to your trash cans.

Busch Systems develops more new molded recycling, waste and compost containers than all other manufacturers combined, and their recycling systems are specifically manufactured to be clear and easy to use in order to prevent contamination and generate the cleanest possible stream of recyclables. Busch Systems will also assist and support customers in creating recycling programs in their companies and communities. With over 100 years of combined recycling program experience, the Busch team of recycling consultants are pleased to share their expertise to make your program a great success. Do not wait! Contact your friendly representative today via **800/565-9931** or **buschsystems.com!**

## FOR BRIGHT IDEAS, ASK THE STAFF

Companies are moving beyond the suggestion box

In an effort to cut costs and create new products and services, firms are seeking ideas from their own employees on everything from money-saving strategies to product design. To encourage participation, some are holding contests, voting and setting up "ideas kiosks."

It's often the employees—rather than outside consultants—who know a company's products and processes best. According to management experts, many of the most innovative companies tend to solicit ideas from staff throughout the organization, not just the executive ranks. But it's often hard for rank and file workers to be heard. Research has found that the average US employee's ideas, big or small, are implemented only once every six years, says Alan G. Robinson, a professor at the Isenberg School of Management at the University of Massachusetts, Amherst.

Now though, more companies are realizing the value of their workers' input. Spurring the process are so-called innovation-management programs such as BrainBank Inc., InnoCentive Inc. and Spigit Inc., which help companies set up online idea-submissions systems in which employees can enter, comment and vote on ideas.

Accounting and consulting firm PricewaterhouseCoopers launched an idea-management website called iPlace two years ago as a way to gather employee ideas that could help cut costs, improve customer service and increase revenues, says Mitra Best, the firm's US innovation leader. Employees post ideas, sometimes in response to company-wide "ideas challenges," and vote and comment on their colleagues' submissions.

The firm promises that a team of senior managers will review an idea within 30 days of its submission and notify the employee of its status.

About 60% of the firm's 32,000 US employees have either submitted, commented or voted on ideas, says Ms. Best. Of the more than 3,300 new ideas submitted—which range from mobile apps for expense reports to changing printer defaults to print double-sided—140 have been implemented. Ms. Best says the firm doesn't directly measure cost-savings from the ideas program, but that some suggestions, such as one that changed the way the firm collects employee expense receipts, have saved "hundreds of thousands" of dollars.



IdeasAmerica, an association for "suggestion administrators," who manage suggestion submissions, surveyed 31 of its 125 members last year. The study found that submitted ideas saved respondents more than \$110 million dollars in time, materials, labor or energy, an average of \$1,256 per suggestion.

At Bruce Power LP, a nuclear energy company in Ontario, Canada, employees can submit ideas through 10 special-purpose kiosks throughout the plant dedicated to collecting employee ideas. They look like ATMs, says Chief Executive Duncan Hawthorne. The company implemented the kiosks several years ago so that the plant's workers, many of whom aren't deskbound, could have an accessible way to submit proposals. Employees vote on submissions. "It's like the American Idol of ideas," says Mr. Hawthorne. Ideas submitted have ranged widely from improving efficiency by increasing stocks of tools to creating a dedicated facility for forklift maintenance. Some 11,000 ideas have been submitted in three years among the firm's roughly 7,500 employees and contractors, generating "millions" of dollars in cost-savings, says Mr. Hawthorne.

Some companies pay financial rewards for ideas (typically as a percentage of cost savings, which can be tough to measure), but Dr. Robinson says that isn't usually an effective tactic for drawing submissions on a continuing basis. What drives most people to submit ideas is a real desire to make their work easier and cut through hassles, rather than monetary rewards, he says.

At Troyer Foods Inc., a Goshen, IN, wholesale food distributor with about 280 employees, workers who submit ideas to an online system launched last spring receive points they can redeem for merchandise and other perks, such as designated parking spaces. Becky Ball-Miller, Troyer's CEO, says the company wants submitting ideas to be so ingrained that it becomes "part of the job expectation and part of the performance review." Ideas that have been implemented include adding another refrigerator to the break room and designating a section

of the parking lot as “cars only” so large pickup trucks don’t block spaces; there have also been cost-saving suggestions encouraging the company to reexamine some pricey vendor contracts.

Great ideas can also come from unexpected places. When insurer Allstate Corp. held an online idea challenge to design a mobile app for its insurance products, one winning idea came from one of the firm’s Buffalo-based trial attorneys. “I can guarantee you his boss didn’t ask him, ‘got any mobile ideas?’,” says Matt Manzella, Allstate’s director of technology innovation.

Silverman, Rachel Emma, “For Bright Ideas, Ask the Staff,”  
The Wall Street Journal, October 17, 2011

## Mardi Gras Beads Recycling

An estimated 25 million pounds of plastic beads make their way through New Orleans every Mardi Gras. And because they can’t be processed by local recyclers, they often end up as litter in nearby waterways or dumped in landfills. But several local community groups worked to collect this year’s Mardi Gras beads and reuse them at other events.



The Arc of Greater New Orleans, a non-profit that provides jobs for individuals with mental disabilities, has introduced a “Catch and Release” float

that encourages party-goers to toss back their baubles at the end of the parade. Collected beads are bundled and resold at discounted prices for next year’s festivities or for other celebrations throughout the year, including St. Patrick’s Day. The trailer was showered with 1,000 pounds of beads during its debut at a February 5 parade in Metairie, LA—1,000 pounds of plastic that will be kept out of the landfill. The collection float will follow two other parades this season.

VerdiGras, a non-profit that aims to green Mardi Gras, also collaborated with Arc this year to pilot a parade-route recycling program, setting out bins for beads, paper, plastic and aluminum along a six-block stretch.

Arc will also be collecting unwanted beads at four locations throughout New Orleans and the neighboring cities of Metairie and Westwego. Last year, Arc accumulated 100,000 pounds of beads through school bead drives, bead recycling bins stationed at grocery stores and donations from private citizens.

<http://earth911.com/news/2012/02/21/will-mardi-gras-beads-be-recycled/>

## GREEN CEMENTS

Last year, the world produced 3.6 billion tons of cement—the mineral mixture that solidifies into concrete when added to water, sand and other materials—and that amount could increase by a billion tons by 2050. Globally, the only substance people use more of than concrete, in total volume, is water. Cement’s virtues have long been plain: It is inexpensive, pourable and becomes hard as a rock.

However, one important detail is seldom acknowledged: Cement is dirty. The key ingredient is limestone, mostly calcium carbonate, the remains of shelled marine creatures. The recipe for making cement calls for heating the limestone, which requires fossil fuels. And when heated, limestone sends carbon dioxide gas wafting into the atmosphere, where it traps heat, contributing to global warming. Cement production is

responsible for 5% of the world’s human-produced carbon dioxide emissions. With booming countries such as China and India using cement to construct their rise, cement’s dirtiness looms as one of the foremost downsides of globalization. Different versions of green cement on the horizon include:

Australian developers have tried a new recipe, mixing Portland cement with magnesium oxide. It was found that the blend did not reduce overall carbon dioxide emissions.

A cement recipe from Novachem in London mixes magnesium oxide and water with other chemicals to harden the cement. That means the cement, in some scenarios, is not just carbon neutral—it’s carbon negative. For every ton of cement produced, one-tenth of a ton of carbon dioxide could be absorbed.

Calera in California has perhaps the most unusual approach. It harnesses carbon dioxide emitted from a power plant and mixes it with seawater or brine to create carbonates that are used to make cement. They can be added to Portland cement to replace some or all of the limestone.

Calix, an Australian company, makes cement using super-heated steam, which modifies the cement particles and makes them purer and more chemically reactive. The process also separates out carbon dioxide, making it easier to capture the gas and keep it out of the atmosphere.

Louisiana Tech University is doing away with limestone altogether. It’s using a paste called geopolymers, which is made of fly ash, sodium hydroxide and potassium hydroxide.

Eventually the dust will settle, and one of these ideas will work!

Rosenwald, Michael, “green cement,” Smithsonian magazine, December 2011, p. 53-56

## Waste Land

You’ll enjoy this Oscar-nominated documentary about artist Vik Muniz’s trek to the largest landfill in the world, Rio de Janeiro’s Jardim Gramacho, to film catadores (pickers of recyclables), and the way it affects the lives of 2,500 pickers through art produced there. You’ll enjoy the valuable lesson about what society discards. If you have access to Netflix or other video libraries, be sure to get this one.

## PICKING THE BRIGHTEST, MOST EFFICIENT BULB

A walk down the lighting aisle prompts an assortment of questions. Is it energy efficient? Will it switch on fast? Can I put it on a dimmer? What is a lumen? How long will it last? Why so pricey? Why is it a weird color? Here’s a brief guide to some bulb basics, with help from *Consumer Reports* ratings, and a peek at what the future holds for the light bulb (hint: lower prices and remote control).

**The Big Three Plus One:** Bulbs can be divided into three main categories: incandescents, compact fluorescents (CFLs) and light-emitting diodes (LEDs). We’re most familiar with incandescents, which make use of technology from over 100 years ago. These cost the least, but emit heat and use up the most energy. An incandescent lasts an average of 1,000 hours, or 125 days when used for eight hours a day.

More recently, halogen incandescent bulbs have become popular. The bulbs, which cost as little as \$3 for two, look and behave like incandescents by dimming and turning on immediately, but use less energy. The Philips EcoVantage line, which

became available in April 2011, uses 28% less energy: A 72-watt bulb replaces a 100-watt, and a 43-watt bulb replaces a 60-watt. Halogen incandescents last as long as a traditional incandescent bulb.

Compact fluorescents, the spiral bulbs that became popular about five years ago, use less energy than incandescents but made a rough first impression. Compared with incandescents, compact fluorescents can appear harsher in color and most don't turn on immediately. They're made of glass, like incandescents, cost about \$5 to \$10 each and have an estimated average lifespan of 10,000 hours, or about 3½ years at eight hours a day. They contain a small amount of mercury and can be recycled at stores like Home Depot.

LEDs, which look roughly like the incandescents, are the latest hit in energy-efficient bulbs. They're also the most expensive, costing around \$20 to \$60 a bulb, though this will drop as they become more prevalent.

These bulbs, which don't contain mercury, turn on immediately, even in cold weather. Some are made of a durable plastic and many can be dimmed. Their light-emitting surfaces remain cool to the touch. The hue of light from these LED bulbs appears more like that of the traditional incandescents. They are estimated to save up to 85% more energy than standard incandescents, with a lifespan of 20,000 to 50,000 hours, or 20 to 40 years. At seven hours a day, one bulb could last an average of 17 years.

**New Labeling Explained:** For years, we've measured light bulbs by watts, which indicate how much energy a bulb uses. But bulb brightness is measured in lumens. Many of the new light bulb boxes list lumens and include helpful notes about how the bulb compares with the wattage you are looking to replace. An incandescent 40-watt bulb gets replaced with a 450-lumen bulb; a 60-watt bulb with a 800-lumen bulb; a 75-watt bulb by a 1,100 lumen and a 100 watt by a 1,600 lumen.

More light bulbs are now packaged with a "Lighting Facts" label. Besides lumens, this may include factors like lumens per watt (bulb efficiency); watts (energy used to make the light); correlated color temperature, which indicates cool or warm color (about 2700 Kelvin replicates what we're familiar with in a traditional incandescent); and a color-rendering index (the measurement of a light's appearance on objects).

**Best in Show:** *Consumer Reports* recently tested several bulbs for factors like brightness, warm-up time, light distribution and actual lumens. The \$10 GE Energy Smart SAF-T-GARD earned the highest overall ranking for 60-watt equivalent spiral CFL bulbs. The \$25 Philips AmbientLED 12.5W ranked best overall in the 60-watt equivalent A19 style (the typical pear-shape found in incandescent bulbs) covered bulb category.

**Future Is Bright:** Lighting Science Group Corp., maker of Home Depot's EcoSmart bulbs, unveiled its sub-\$15 World Bulb in December. This is a redesigned, 60-watt-replacement LED bulb that uses less power than the 13 watts of the company's current equivalent bulb. It'll be available later this year in the US.

Lighting Science Group also has paired with Google to create the Android@Home Intelligent LED bulb, which people will be able to control using an Android smartphone, tablet or a com-

puter. The bulb, which is expected to come out before June, will have an embedded chip and works with a gateway box that hooks into a router.

By June, Philips Lighting North America will debut its L Prize Bulb, an LED bulb that was the first to win the Department of Energy's "L Prize," an award for energy efficiency. Designed to replace a 60-watt incandescent, the LED bulb consumes less than 10 watts, according to Philips. In rigorous testing, the Energy Department said the bulb had a useful lifetime of more than 25,000 hours. The bulb will likely start out at about \$50.

**Picking a Bulb:** Light-bulb savings calculators found online, like one from National Geographic (<http://environment.national-geographic.com/environment/energy/great-energy-challenge/light-bulb-savings-calculator/>), give people a rough idea of how much they may save over time with incandescent, compact fluorescent and LED bulbs.

Boehret, Katherine, "Picking the Brightest, Most Efficient Bulb," *The Digital Solution*, *The Wall Street Journal*, January 18, 2012

## HELLO LUX LIGHTING!

ALLY MEMBER Lux Lighting Design is a full-service lighting design company dedicated to providing the ultimate in creative and functional designs produced with the client's needs foremost. Interior and outdoor lighting designs are created with the unity of the project's appearance in mind. Lux Lighting Design is driven by award winning lighting designer, Doreen Le May Madden.



Professionals in the architectural and design communities work with Lux Lighting Design due to the presentation of extensive design concepts, lighting product knowledge and its lighting design philosophy for quality lighting. Lux Lighting Design's reputation of fulfilling all lighting requirements while meeting budgetary needs and exceeding the creative expectations of the design intent, results in projects of the highest quality. Lux Lighting Design uses the latest proven technology in products and lighting controls for energy efficient designs without compromising aesthetics.

Our Services Include: Preparation of detailed lighting plans, drawings for integrated lighting details, full specification of light products, load calculations, lighting project management, electrical installation, light level calculations, lighting energy evaluation, lighting controls design and installation, custom lighting fixture design, energy efficient lighting products, window shade controls and occupancy/daylighting sensors.

More information is available by calling **617/484-6400** or at **LuxLD.com!**

## STRUGGLES IN EUROPE'S CARBON MARKET MAKE IT CHEAPER TO POLLUTE

Europe's main weapon in the battle against climate change is now fighting for its own survival. In early January 2011, investors in the continent's cap-and-trade system still had to pay some €14 (\$18.30) for the right to emit one ton of carbon dioxide into the air. By early December, the price of one emission allowance had tumbled to a meager €6.41—making it much cheaper to pollute and slashing the financial incentives for companies to invest in low-carbon technologies. Analysts

Lighting Science Group's World Bulb uses less than 13 watts and will cost less than \$15 a bulb.



The Philips L Prize Bulb consumes less than 10 watts and has a lifespan of more than 25,000 hours.



warn that the prospect of another recession in the debt-ridden continent, and the accompanying decline in emissions, could push prices below €2 by the end of January, 2012.

The troubles in the carbon market are linked to the struggles of Europe's other ambitious project, the euro. And just as financial investors have looked to the European Central Bank to save the currency through massive intervention in the bond markets, analysts say the emissions market may need similar centralized help. Last December, 19 companies, including oil giant Royal Dutch Shell PLC, Philips Electronics NV and supermarket chain Tesco PLC, sent a letter to the European Commission urging it to reduce the number of emission allowances in the system and figure out how to protect the market from future economic shocks.

"The lower price is really undermining the development of technologies that will be needed in the decades to come," said David Hone, Shell's climate change adviser. Shell has been one of the pioneers of carbon capture and storage. But investing in new technologies like those only becomes commercially viable at a carbon price of between €25 and €30, Hone said. "Over the last few months, we have seen some of these projects disappear," he added.

Steinhauser, Gabriele, Associated Press, "Struggles in Europe's carbon market make it cheaper to pollute," Houston Chronicle, December 21, 2011

## GREEN WALLS FOR GREENER CITIES

Contact with nature is not just an amenity: It's important for well-being. Green walls liven up urban spaces while improving building performance.

**Green Wall Systems:** Green walls provide an important connection to nature in urban settings, using a combination of vegetation and support frames mounted to exterior walls. These systems can improve the thermal performance of a building by creating shade and an air space between the plants and the building. They also absorb carbon dioxide, mitigate stormwater runoff and reduce noise.



There are two main types of green wall: living walls are self-sufficient systems that include a framework and special-

ized membranes, panels or modules to support plants; and green facades use plants such as ivy that grow up a supported trellis system but have roots in the ground.

We should all value the connection with the natural world, or biophilia. Biophilia has been shown to have tangible benefits, including reduced stress, improved productivity and faster healing, but integrating greenery among limited—and expensive—urban real estate is no easy task. Maybe the answer is to think vertically.

**What is a green wall?** Exterior green walls, sometimes referred to as living walls, green facades, eco-walls and a variety of other names, use frames mounted to exterior walls to support vegetation growth. Their greenery helps break up the urban landscape of concrete, glass, and steel; improve the thermal performance of a building by creating shade and an air space between the plants and the building; absorb carbon dioxide; mitigate stormwater runoff and reduce heat and noise. And since thermal performance and energy-saving design are not visible to the public, green walls are one way for building owners to advertise their green credentials.

**GSky exterior Pro Wall System:** But green walls have to be well designed and maintained or else you can end up with mold, moisture damage or dead plants. GSky's exterior Pro Wall System reduces these risks using a stainless steel frame and panels that incorporate a structural growth medium. The plants are pre-grown to design specifications, monitored for temperature and moisture and watered automatically using a drip irrigation system. Designing the wall is no easy task. It begins with careful assessment of the site, water and drainage consideration, seismic and wind loads, and power and placement of the irrigation system. Local plants are then selected and pre-grown in a nursery before the panels are installed along with the frame, irrigation and monitoring system. GSky's Pro Wall green wall can integrate different plants to create distinctive patterns.



The monitoring system is automated, setting off alerts if there is a problem with the irrigation, and can be paired with GSky's maintenance program. These green walls do not have to be a single shade of green. Using different plant species, you can create designs within the greenery.

**More basic green walls:** GSky also offers its Basic Wall Container System, which contains a trellis and integrated containers to support vine growth. The containers are three feet and five feet high, and the vines can be either pre-grown or allowed to grow naturally, which could take up to two years. You can't get plant designs with these systems. They are meant for large exterior walls, and can even include a catwalk behind the façade of plants for easier maintenance on high walls. Like the Pro Wall System, they come with an irrigation and monitoring system.

**Keeping the "green" in "green wall":** Providing the benefits of biophilia using a green wall only works if the plants are actually green. GSky ensures its systems perform with warranties of ten years on the planters, five years on the irrigation system, and a "100% Plant Health Guarantee" when paired with the maintenance contract.

While green walls might not be ideal for every building or climate, the more greenery we can add to urban environments the healthier the environment.

[http://greenspec.buildinggreen.com/content/green-walls-greener-cities?utm\\_source=BuildingGreen.com+Bulletin&utm\\_campaign=f06f1b1252-GSL\\_36\\_BGNM\\_1\\_2012&utm\\_medium=email&mc\\_cid=f06f1b1252&mc\\_eid=0cc8cf2bf5](http://greenspec.buildinggreen.com/content/green-walls-greener-cities?utm_source=BuildingGreen.com+Bulletin&utm_campaign=f06f1b1252-GSL_36_BGNM_1_2012&utm_medium=email&mc_cid=f06f1b1252&mc_eid=0cc8cf2bf5)

## Energy Drain From TV Cable Boxes

We hear a lot about how much energy modern day flat screen TV sets consume, but the innocuous set-top boxes that drive them, along with their built-in digital video recorders, may be even more to blame.

A recent analysis conducted by the consulting firm Ecos on behalf of the Natural Resources Defense Council (NRDC) found that "the average new cable high-definition digital video recorder (HD-DVR) consumes more than half the energy of an average new refrigerator and more than an average new flat-panel television." Overall, set-top boxes in the US consume some 27 billion kilowatt-hours of electricity. This is equal to the annual output of six average (500 megawatt) coal-fired power plants and



accounts for the emission of 16 million metric tons of carbon dioxide. Part of the reason these boxes are such energy hogs is that they typically operate at nearly full power even during the two-thirds of the time when they are not actively in use driving TV screens or recording to built-in DVRs. "As a nation, we spend \$2 billion each year to power these boxes when they are not being actively used," reports NRDC.

To make matters worse, American consumers have little if any choice about which set-top boxes they get from their cable or satellite service providers. Since the providers usually own the boxes yet don't have to pay consumers' electric bills, they have little incentive to utilize or develop more efficient models. In Europe, Sky Broadcasting is beginning to distribute more efficient equipment to subscribers there. NRDC is urging the largest pay-TV service providers in the US (Comcast, Time Warner, DirecTV, Dish Network, Verizon and AT&T) to heed the efficiency call with their own set-top box and DVR offerings.

Redesigning set-top boxes to power down when not in use is perhaps the biggest opportunity for energy savings. "Innovation to reduce power consumption when not in active use—such as has occurred with mobile phones, which also work on a subscriber basis and require secure connections—is sorely needed in set-top boxes," counsels NRDC. Also, re-jiggering content delivery systems so that only one main set-top box sends signals to all the televisions in the house (or to lower power "thin client" boxes) could also cut down household electric bills and carbon footprints. The group adds that "better designed pay-TV set-top boxes could reduce the energy use of the installed base of boxes by 30% to 50% by 2020."

Last year the US government released new energy efficiency standards for set-top boxes within its EnergyStar appliance efficiency rating program. While this new specification is a step in the right direction, consumers have little knowledge about such options. NRDC urges pay-TV subscribers to request that their providers make available set-top boxes and DVRs that meet the newer EnergyStar 4.0 standards. The more of us that request such improvements, the likelier they are to happen. And the cable or satellite provider that can save customers money while reducing overall environmental impact may just win over an increasingly large sector of the American people that actually cares about being green.

Scheer, Roddy and Doug Moss, "Energy Drain From TV Cable Boxes," EMagazine.com, January 29, 2012

### Member News

#### Shaheen's Motel, Tupper Lake, NY

Robyn and Terry Doolen at Shaheen's Motel in Tupper Lake, NY, were originally inspired greenwise by The Wild Center ([wildcenter.org](http://wildcenter.org)), also called the Natural History Museum of the Adirondacks, a local non-profit public attraction built in 2006. They made a contribution to its initial building fundraising efforts and continue to support its educational mission as a business member.

The New York State Hospitality & Tourism organization in conjunction with Audubon International and the New York State Department of Environmental Conservation (NYSDEC) offered green certification. They applied, were selected and were on their way to fully committing Shaheen's Motel to becoming better stewards of their environment.

Starting small with their green program by replacing light bulbs, they advanced to replacing windows, installing solar

panels and swapping an old oil heating unit for a cleaner building liquid propane furnace. The new furnace saved \$9,000 the first year!

Along the way Robyn was looking for more broad-based opportunities to enhance and improve their knowledge, and "Green" Hotels Association® membership was suggested to her by a fellow hotelier. Shaheen's Motel is now a proud 3-year Partner Member.

Pleased at every step and grown in awareness, they feel sure they've educated guests along the way. Learn more at [shaheensmotel.com](http://shaheensmotel.com). Every bit helps!

## SHARPENING AN EDGE

Few crave the Shamwows, ginsu knives and other wares hawked on late-night infomercials. Even so, we might come to swear by one such product. When your razor starts to lose its edge, pop it in a Save-A-Blade for a few seconds and it will be nearly as good as new. Functioning like a knife sharpener, the handheld, battery-powered device works for all razors. The commercial promises "200 perfect shaves," but tests found it maxed out at about 150. That's still ten times more decent shaves that typically gotten, which means you'll defray the sharpener's cost (\$14.99) in about six months—and cut down on the number of blades you send to the landfill. See [amazon.com/Sharpener-Everblade-Magnetically-Sharpens-Blades/dp/B004797L3E](http://amazon.com/Sharpener-Everblade-Magnetically-Sharpens-Blades/dp/B004797L3E) and watch [youtube.com](http://youtube.com) videos.

Seiderman, David, "Gaining an Edge," Audubon, May-June 2010, p. 16

## BAN ON SHARK FIN SOUP ADVANCES THROUGH ASIA

Luxury hotel chain Shangri-La has announced it will stop serving shark fin at its 72 properties world-wide, as the campaign to protect the fish gains ground among Chinese consumers.

A swell of opposition against shark fin soup—a traditional but increasingly controversial Chinese dish—gained backing from the luxury Shangri-La hotel chain just days before Lunar New Year, underscoring efforts world-wide to stop the hunting and trading of the endangered fish. Shangri-La Asia Ltd. said it would ban shark fin from all of its 72 hotels, most of which are in Asia. About 95% of all shark fin is consumed within China, according to marine conservation group WildAid.



The shark fin display in a Hong Kong store.

The ban is the largest among a spate of similar moves across Asia. In Singapore this month, supermarket chains FairPrice and Carrefour said they would halt the sale of shark fin in outlets in the city-state, which has a majority-Chinese population. ColdStorage, another chain with several outlets in Singapore, banned it from its stores there last year.

Shark fin, which can cost up to \$400 a pound in Hong Kong, is traditionally served as a soup and is seen as a luxurious status symbol in Chinese culture, revered for its supposed powers to enhance sexual potency and skin quality. But environmental and animal-rights groups have long opposed the harvest of fins, which they say has severely depleted the shark population. According to WildAid, fins from more than **70 million**

**sharks** are used each year for soup.

Shangri-La's decision comes two months after the Peninsula Hotels announced a chainwide ban. Meanwhile, Chinese restaurant chain South Beauty also removed it from its menus in November. In the US, Hawaii, California, Washington and Oregon have enacted legislation that banned the trade, sale and possession of the ingredient.

Shangri-La's ban came as Lunar New Year was approaching, a holiday when shark fin consumption is most popular as diners like to splurge and show off their wealth. Shangri-La initially removed shark fin from its menus in December 2010, but still served it on request. This week, it banned the ingredient entirely. "Already, the feedback on the ban has been phenomenally positive," said Maria Khun, director of communications at the Shangri-La in Hong Kong. "I believe in the long term, the ban won't have an effect on business. People are willing to do the right thing."

The Peninsula said that before its ban, more than nine-tenths of its Chinese banquets at its Hong Kong hotel served shark fin. The hotel said its banquet business hasn't suffered since the ban was announced.

Other luxury hotels continue to serve the dish. The Four Seasons Hotel removed it from their menus, but still offer it on request. "It's still available, but we're not outwardly putting it on the menu as to try to reduce consumption," said Claire Blackshaw, a spokeswoman at the Four Seasons Hong Kong.

At Sun Tong Lok, a high-end restaurant in Hong Kong's Kowloon district that is renowned for its shark fin soup—the dish can cost up to \$390 for a tureen that contains a 500-gram (1.1 pound) fin—there are no plans to take it off the menu and it remains a popular order.

**Imitation shark's fin**, made of gelatin, has become an increasingly popular alternative and is far cheaper than the real thing, selling for as little as \$3 for a bowl at Chinese restaurants in the US. Many young diners are keen to skip shark fin soup at wedding banquets, but feel obliged to include it because of their status-conscious parents and grandparents who see the delicacy as a must-have at such occasions. "Definitely, we feel the pressure," said Stephen Yiu, a 29-year-old who is planning a wedding in September at the Four Seasons Hotel and would prefer not to have shark fin at the banquet. "It's a Chinese tradition to have shark's fin at a happy occasion. I'll have to persuade my parents and grandparents that I want an alternative."

## "Green" Hotels Association®

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ecological consciousness in the hospitality industry.*

Not all Chinese diners are keen on banning the dish, and the controversy can be a culturally sensitive issue. "I think Westerners like to blame Asian countries for eating exotic things, but why is shark fin always the target? What about foie gras or other things like that? There is a double standard," said Chew Lai Tong, a 46-year-old taxi driver in Singapore.

Chow, Jason, "Ban on Shark Fin Soup Advances Through Asia," *The Wall Street Journal*, January 20, 2012

## THE PLANET IN BRIEF

**The End of a Monopoly?** Prices for rare earth elements, a group of metals that includes cerium, dysprosium, terbium and yttrium, have skyrocketed in recent months. These elements have unique chemical properties and are essential to all high-tech industries, including high speed trains and hybrid engines, computers, cellphones and LEDs. Up to now, China produced (and therefore controlled) 90% of the world's rare earth elements. Last summer, however, researchers from the University of Tokyo discovered more than 90 billion tons of rare earth elements in the international waters of the Pacific Ocean, representing nearly 1,000 times the known Chinese reserves. This discovery should revive Japan's economy and help regulate prices.

**Coconuts for a Cleaner World:** The next time you sip a cocktail served in a coconut, don't throw it away. A team of researchers from a Brazilian engineering university managed to remove 70% of impurities from wastewater using a simple mixture of green coconut shell and sand. This new eco-friendly water treatment prototype (a reactor of stainless steel in which the waste is retained in a bamboo structure where it is purified by the coconut) could be installed in the villages where coconuts are abundant. What's more, the water has not been treated with chemicals, and can be used to irrigate roses and corn.

**10 billion kilos of waste** are produced every day in the world, excluding agriculture and construction. A European produces 600 kg of waste/year, an American 700 kg and a city-dwelling African 150 to 200 kg.

Tarom Romanian Air Transport, onboard magazine, November, 2011, p. 110

## FINAL WORDS . . .

We're in This Together: "When it rains, it rains for everyone. When it snows, it snows for all of us, and when the environment is contaminated, it is contaminated for all of us."

Mapuche spokesperson Veronica Huilpan in response to oil exploitation and cultural repression in Chile and Argentina. From "Keeping the Balance," by Lisa Garrigues, in *Yes!* magazine, Spring 2003