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MARCH 2007

# Rocky Mountain Monthly

IESNA ROCKY MOUNTAIN SECTION

WWW.IESRMS.ORG

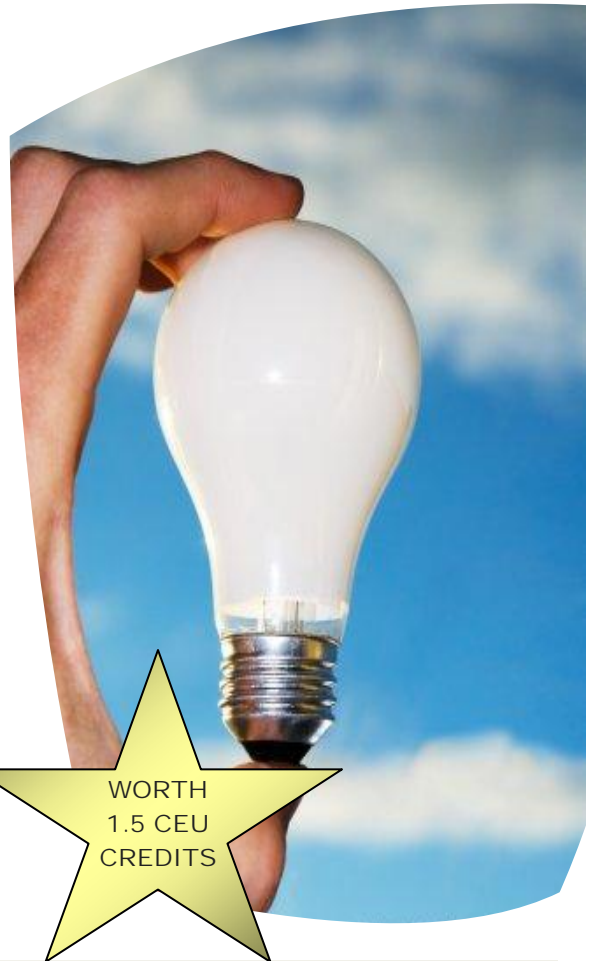
## CONFESSIONS OF A SUSTAINABILITY GEEK

"Energy efficiency" has been my middle name for 20 years now. I have struggled to convince clients to use new technologies of fluorescent lighting, metal halide lighting, dimming ballasts, occupancy sensors, fancy controls, daylighting, luminaires that control glare and light pollution, and low-toxicity materials. After 20 years, what have I learned? That sometimes it's just NOT worth the effort and cost.....

This will be a chance for me to whine and gnash my teeth about disappointing results. And then, I want to hear you gnash your teeth, too. We all have bitter stories that others can learn from. But there are happy stories, too. Come to this. Let's compare problems and solutions and triumphs and learn from each other.

Learning objectives:

- Learn which sustainability techniques are really worth the effort and money
- Learn about some little-publicized unpleasant side effects of energy efficient or responsible lighting stuff
- Learn about the happy events that keep us trying to do the right sustainability thing



WORTH  
1.5 CEU  
CREDITS



## SUSTAINABILITY MEETING DETAILS

Register for this meeting right now!



Click here to be automatically directed to the registration website.

**Date:** Wednesday, March 21, 2007

**Time:** 5:30pm

**Cost:** \$25 Members  
\$30 Non-Members  
\$15 Students

**DIRECTIONS?**

**CLICK HERE**



**Location:** Original Brooklyn's  
2644 West Colfax, Denver

**RSVP:** [rsvp@iesrms.org](mailto:rsvp@iesrms.org)

**Deadline for RSVP is Tuesday, March 20**

Wisdom,

Wonders,

and

Wit

## DAYLIGHT SAVING TIME

We covered this topic last year, but now they've changed it again! So we're reviewing it... again!

Spring forward... fall back... It's ingrained in our consciousness almost as much as the A-B-C's or our spelling reminder of "i before e..." In the winter, the afternoon Daylight Saving Time advantage is offset by the morning's need for more lighting. In spring and fall, the advantage is less than one hour. So, Daylight Saving Time saves energy for lighting in all seasons of the year except for the four darkest months of the year (November, December, January and February) when the afternoon advantage is offset by the need for lighting because of late sunrise.

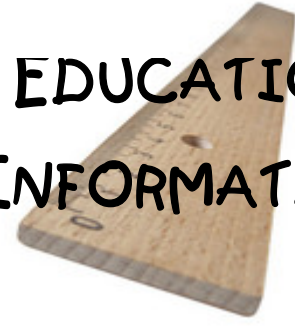
We also use less electricity because we are home fewer hours during the "longer" days of spring and summer. Most people plan outdoor activities in the extra daylight hours. When we are not at home, we don't turn on the appliances and lights. A poll done by the U.S. Department of Transportation indicated that Americans liked Daylight Saving Time because "there is more light in the evenings / can do more in the evenings."

While the amounts of energy saved **per household** are small, added up they can be very large. A report was released in May 2001 by the California Energy Commission to see if creating an **early DST** or going to a **year-round DST** will help with the electricity problems the state faced in 2000-2001-2002. The study concluded that both Winter Daylight Saving Time and Summer-season **Double** Daylight Saving Time (DDST) would probably save marginal amounts of electricity - around 3,400 megawatt-hours (MWh) a day in winter (one-half of one percent of winter electricity use - 0.5%) and around 1,500 MWh a day during the summer season (one-fifth of one percent of summer-season use - 0.20%). Winter DST would cut winter peak electricity use by around 1,100 megawatts on average, or 3.4 percent. Summer Double DST would cause a smaller (220 MW) and more uncertain drop in the peak, but it could still save hundreds of millions of dollars because it would shift electricity use to low demand (cheaper) morning hours and decrease electricity use during higher demand hours.



On August 8, 2005, President George W. Bush signed the *Energy Policy Act of 2005*. This Act changed the time change dates for Daylight Saving Time in the U.S. Beginning in 2007, DST will begin on the second Sunday in March and end the first Sunday in November. The Secretary of Energy will report the impact of this change to Congress. Congress retains the right to resume the 2005 Daylight Saving Time schedule once the Department of Energy study is complete.

## EDUCATION INFORMATION



### ED-100 Class Now Enrolling

The Rocky Mountain section is offering the ED-100 Fundamental Lighting course as part of the ongoing efforts of the IESNA to promote education in the art and science of lighting.

The ED-100 course is an introductory survey of the principal issues in lighting. Vision, color, and the physiology of the eye are included, as well as basic illumination terminology. Sources, photometry, and calculations are discussed, and further information about economics and specific applications will be provided. The course materials are included with the registration fee and available to early registrants for advance study. The *Ready Reference*, a great desktop book, is also included.

The instructor will be David Keith with additional guest instructors and an extensive set of samples and demonstrations.

#### COURSE DETAILS

**Dates:**

April 21, 28, May 12, 19

**Times:**

8:00am - NOON

**Cost:**

\$500 Non-Members  
\$350 Members

**Location:**

Corelite; 4675A Holly  
Denver, Colorado

[Click here to register now!](#)

**Register Online NOW!**

For more information e-mail David Keith, Education Chair, at [educate@iesrms.org](mailto:educate@iesrms.org).

### Thanks to our LED Expo Exhibitors!



Controls Plus



GLS George Lacey Sales



To advance knowledge and disseminate information for the improvement of the lighted environment to the benefit of society.

**LIGHTING MATHEMATICS**

This course is designed for architects, builders, developers, engineers, lighting designers, electric utility specialists, interior designers, distributors, and contractors who are involved in lighting systems. The basics of lighting and electricity calculations will be covered, giving an overview of every application from residential to commercial projects.

**DID YOU KNOW?**  
The Rocky Mountain section offers education for your whole office? Contact us to find out how we can provide custom-tailored lighting education for your employees during lunch or after work!

*Most courses have been registered with IESNA and credits have been requested for IESNA-CEU, AIA-LU, and IDCED-CEU credits.*

**WEB LINK**  
*Click the link to go right to the site!*

**www.BGBG.org**  
The Boulder Green Building Guild is an association of building professionals dedicated to promoting healthier, resource-efficient homes and work places. Our vision is to empower people to build healthy, resource-efficient communities.

**www.SMARTENERGYLIVING.org**  
The Colorado Energy Science Center's mission is to increase the understanding and appreciation of energy science and technology in order to enable decision-makers to adopt energy practices that produce economic benefits, reduce environmental impacts and increase the sustainability of energy supply.

**www.CRES-ENERGY.org**  
The Colorado Renewable Energy Society (CRES) is a nonprofit membership organization that works for the sensible adoption of cost-effective energy efficiency and renewable energy technologies by Colorado businesses and consumers.

**www.CONSERVATIONCENTER.org**  
The Energy Center of the Rockies advances energy efficiency, renewable energy and energy conservation in the Colorado and Rocky Mountain region.

**Denver Continues its Green Commitment!**

Greenprint Denver is a long-term, citywide initiative to promote the importance of sustainable development and ecologically-friendly practices throughout the community.

With a comprehensive action agenda, the city aims to integrate environmental impact considerations into its programs and policies. Participation from the community is vital for the city to meet a series of goals over the next five years.

By the end of 2007, Denver will:

- Require that all new city construction and major renovations meet the LEED Silver standard of the U.S. Green Building Council, and meet Energy Star® guidelines.

- Subject to approval by Xcel Energy Corporation, construct a solar power plant capacity capable of powering the equivalent of 1,000 homes.

- Through partner Waste Management Inc, the contract operator of Denver Arapahoe Disposal Site, begin construction of a 3.2-megawatt landfill gas-to-energy power plant, capable of powering the equivalent of more than 1,500 homes. The plant will use gas naturally created by landfill materials.



- Reduce energy use by 1 percent per year, measured per passenger at DIA and per building square foot in city government facilities.

*(Oh, and Kermit isn't running for Mayor. That was a joke!)*

**Confessions of a Sustainability Geek**  
*Original Brooklyn's*  
March 21  
Guest speaker Naomi Miller joins us to discuss the latest trends in energy efficiency. This session is worth 1.5 LEU credits.

**2006-2007 Upcoming Section Events**

**2007 Golf Tournament**  
*Inverness Golf Club*  
June 8  
Movin' on up, as we grow our annual golf tournament, taking it to Inverness Golf Club in Centennial, Colorado.

**Landscape Lighting Expo**  
*Original Brooklyn's*  
April 10  
Our springtime expo brings the latest technology in landscape lighting, with presentations by various manufacturers on the latest in product updates.

**Getting the Most from your Daylighting**  
*Original Brooklyn's*  
May 15  
The Weidt Group provides an in-depth look at daylighting, and how to make it most effective for various spaces.

**2007-2008 Officer Elections**  
at [www.IESRMS.org](http://www.IESRMS.org)  
March 12-23  
Vote online for your 2007-2008 Rocky Mountain Section officers. More details will arrive via e-mail directly to all section members in good standing!



**“The President is in the White House and Congress is in session. No man is safe in his person or papers.”**

**- Will Rogers**

**A review of light bulb legislation, by Scott Payne**

It is interesting to note a recent bill moving through two different legislatures. The deliberative bodies of California and Australia are contemplating banning the incandescent lamp. While their hearts may be in the right place it could be debated that their minds are not.

Technology is a wonderfully fluid thing, impossible to dam yet equally difficult to command. Just as you would not want, even though he had seen it done before, the flight attendant to fly the airplane, you should be wary of politicians meddling in areas they do not understand.

At last month’s IES meeting we heard a panel discussion about LED lighting. We have all heard glowing reports concerning the various benefits of LEDs. Mr. Leadford, whose company uses a tremendous amount of LEDs in the manufacture of specialty luminaires, told us of the real world difficulties involved in turning this new light source into a commercially viable product. It was clear from the discussion that there are still many new technologies to be developed before we will see LEDs in more than a niche market.

Since Edison first introduced his glowing bamboo filament in a vacuum bottle thirty years after

the end of the Civil War, many changes have occurred to the incandescent lamp. The introduction of halogen gas into a quartz glass envelope dramatically improved lamp life. With the ascendancy of fluorescent lighting there has been little interest in improving incandescent lamp efficacy, lumens per watt. However, in February of this year GE announced a new type of incandescent technology that could boost light output of the incandescent to levels equivalent to compact fluorescent.

The economics of fluorescent lighting are beyond debate. However when considering the cost/benefit of

fluorescents it is necessary to include the toxicity of its life from cradle to landfill. Screw-in compact fluorescents with integral ballasts are especially egregious in the amount of wastage involved.

If lawmakers wished to be helpful in the area of lighting they could pass energy usage standards for lamps. Mandating efficacy requirements would provide a channel to attract technology of all sorts. After all, who, in either of those grand political bodies, would have ever thought of bamboo?




**SECTION SPOTLIGHT**

Visit the website for the *Golden Gate Section*, covering the San Francisco Bay area!

The Capital Section is part of the South Pacific Coast Region.

Click this picture to visit the website for the IESNA Golden Gate Section!

76930201

**[www.iesrms.org](http://www.iesrms.org)**

**HAVE YOU BEEN THERE LATELY?**

091257



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