

Rocky Mountain Association of Energy Engineers



Monthly Lunch Meeting May 15, 2014 2 Tours 2.5 hours long inc lunch

IKEA 9800 E Ikea Way Centennial

RMAEE is touring IKEA this month. Due to tour size restrictions, 20 per tour, we need to offer 2 signups; one for morning and one for afternoon. Lunch, common to both tours, at IKEA is included. Please make sure to sign up for the correct tour.

Morning Tour 10:30 to 1:00

Afternoon Tour 11:30 to 2:30

Highlights include:

- IKEA Centennial has the largest single-use commercial rooftop solar project in Colorado. The 60,000-square-foot array consists of a 498-kW system, built with 2,212 panels
- IKEA Centennial includes the first geothermal project in the United States for IKEA, and will rely on the heat pumps that sit below the ground using the even temperature to heat and cool a building's interior.
- Energy and Water Conservation, Waste Management, and Air Quality and Land Use Projects. See page 10 for more information.

If you have special dietary needs please click on
Dietary Needs

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What's Happening in our Industry

Noteworthy this month:

The US Supreme Court ruled that the EPA can require coal-fired power plants in 28 States to curb their emissions, changing the electricity-generation landscape for many utilities going forward –

<http://www.forbes.com/sites/brighammccown/2014/05/02/supreme-court-rules-6-2-on-epa-air-pollution-reductions-across-state-lines/>

http://www.nytimes.com/2014/04/30/us/politics/supreme-court-backs-epa-coal-pollution-rules.html?_r=0

From ACEEE Newsletter:

A report that shows energy efficiency is the cheapest energy resource in the US today.

<http://www.aceee.org/press/2014/03/new-report-finds-energy-efficiency-a>

Further, at <http://www.aceee.org/press/2014/04/new-study-outlines-plan> a plan for reducing CO2 emissions by 26% through EPA and energy efficiency programs.

Monthly Meetings Info

Forbes Guthrie of Stewart Environmental (Ft. Collins) gave us a presentation on April 10th about the energy-water nexus - how water pumping, filtration, etc. requires increasing energy consumption, especially as demand for water increases with population growth (and the increases in energy demand intrinsic to that). Much thanks to Forbes for helping us out on short notice.

We also had Pentad Associates (one of our Energy Forum vendors) give us a 5-minute spiel on what Pentad provides as a representative for multiple manufacturers. At the March meeting, Denver Electric Contractors gave us a run-down on what DEC provides in products and services. We will try to have one of our Forum vendors at each meeting.

The Thursday, May 15th, 2014 meeting will be a sustainability tour of IKEA's super store in Centennial. It is very important for everyone to register for the morning or afternoon tour ASAP as indicated in this newsletter. We need a good head count for the tours and lunch by Tuesday, May 13th.

As a reminder to anyone holding an AEE certification (CEM, CGD, GBE, CSDP, etc.): Each certified professional is required to obtain Continuing Education Units (CEU) or Professional Development Hours (PDH) each renewal period. Attendance at RMAEE monthly meetings, being on the Board, attendance of AEE conferences, etc. all qualify as credits for CEUs/PDH.

(For more information, please see:

<http://www.aeecenter.org/i4a/pages/index.cfm?pageid=3771>)

Please contact any of the Board with suggestions or commentary on how we can improve RMAEE for you.

Sincerely,

Thom W Johnson

RMAEE Chapter President, 2014

Upcoming Events

All lunch meetings are the third Thursday of the month at Indian Tree Golf Course unless noted otherwise

Stay Connected with the RMAEE!

Visit this award winning website at

<http://www.rmaee.org/>

We've added an employment section.

If you would like to post an employment notice please send your listing(s) to

Dan Sachse at dan.sachse@xcelenergy.com.

Membership – It maybe time to renew!

- ☐ RMAEE Membership Fees may be due. The RMAEE annual fee is \$50/person, unless you hold a National AEE membership. For National AEE members the RMAEE annual fee is \$40. Local membership gets you \$10 off the regular lunch meeting price of \$30 through out the year. Fill out the **application (below)** and fax, mail or email to Steve Kutska.
- Annual Corporate Memberships- Improved! An Annual Corporate Membership (ACM) is assigned to the company, thereby allowing any employee of the company to use this “Annual Corporate Membership” to attend RMAEE meetings. Each ACM allows one company employee to attend the meeting. This is different from previous years, when only the assigned employee could use the corporate membership
- Another membership benefit is the password protected member’s corner on the RMAEE website, www.rmaee.org. All available presentations are stored here in PDF form for local members to download. If you are a local member and do not know the password send an email to dan.sachse@xcelenergy.com and the sign on and password will be mailed to your email address.

Rocky Mountain
Association of Energy Engineers
Membership Form

Members may join the local Rocky Mountain Chapter of AEE at any time during the year.

Membership will run for one year from the month you join RMAEE.

Please send the completed form or attach a business card and send along with payment for your membership dues. We have 2 ways to pay – check payable to RMAEE or Credit Card (Master Card or Visa cards only).

Mail payment to:

Steve Kutska

Xcel Energy

1800 Larimer Street

Denver, CO 80202

Stephen.p.kutska@xcelenergy.com

For questions about membership call Steve Kutska at 303 571-7254.

RMAEE Local Membership Dues Form

Please complete this box or simply attach a business card and mail along with your payment.

- ☐ I am an AEE National Member – a check for \$40 is enclosed for Chapter Dues AEE Member
- ☐ I am NOT an AEE National Member – a check for \$50 is enclosed for Chapter Dues
- ☐ Annual Corporate Membership - 220.00 per year allows the company to send one employee to each meeting. This also includes one free lunch meeting.

Name _____

Company _____

Address _____

City, State, Zip _____

Phone _____

Email _____

Credit Card Information ___ Master Card ___ Visa

Card Number _____

Expiration Date _____

Name as it appears on card _____

Dr. Doug McKenzie-Mohr is the founder of community-based social marketing.

Recommended by Time magazine, his book "Fostering Sustainable Behaviour" has become requisite reading for those who deliver environmental programs. The approaches that Dr. McKenzie-Mohr advocates in these workshops are now being utilized globally. For example, Queensland's "Home WaterWise Service" and "ClimateSmart Home Service," which reached over 500,000 households across the state, made extensive use of community-based social marketing. Dr McKenzie-Mohr has delivered community-based social marketing workshops internationally for over 60,000 environmental program managers. Below is a small sample of recent anonymous evaluations:

- Fantastic, simply invaluable.
- This is hands-down the most valuable workshop/training I've ever attended.
- Speaker was wonderful.
- The best workshop/conference I have ever experienced.
- Outstanding presentation style. Expertise is obvious.
- Superb presentation skills.
- By far, the best workshop I have attended – on any topic!

Who should Attend?

These workshops will be of interest to those working to promote waste reduction, water and energy efficiency, conservation, modal transportation changes, watershed protection, and other sustainable behavior changes. Those who work to promote behavioral changes that promote health, such as active lifestyles, will also benefit from attending. Descriptions of both workshops are provided below.

Introduction (May 20-21): The two-day introductory workshop provides a comprehensive introduction to community-based social marketing and how it is being applied throughout the world to foster sustainable behaviors. Those who attend the workshop will learn the five steps of

community-based social marketing (selecting behaviors, identifying barriers, developing strategies, conducting pilots, and broad scale implementation) and be exposed to numerous case studies illustrating its use. Each participant will receive a copy of the new edition of "Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing." The introductory workshop is a *mandatory* prerequisite for the advanced workshop.

Advanced (May 22-23): This completely new two-day advanced workshop provides an in-depth exploration of how community-based social marketing can be used to foster sustainable behavior. This workshop introduces new research on selecting behaviors, identifying barriers and benefits (including market segmentation, survey sampling and survey creation), applying behaviour change tools (including some exciting new developments regarding the use of commitments, norms, prompts, goal setting, and social diffusion), and piloting programs. The workshop also addresses the effective use of social media and websites in the fostering of sustainable behavior. Further, participants will also be coached in making community-based social marketing presentations to their agency or community and will receive PowerPoint and Keynote presentations for this purpose. Finally, each participant will receive a copy of the new edition of "Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing." To ensure a high level of learning and exchange of ideas, this workshop is restricted to individuals who have previously attended Dr. McKenzie-Mohr's introductory workshop. If you have not yet attended an introductory workshop, you can attend the introductory workshop that precedes the advanced workshop in Denver and then attend the advanced workshop as well. Reduced rates are available for attending both sessions.

Details:

Both the Introductory and Advanced workshops are being held at the Environmental Training Center (301A), Red Rocks Community College, 13302 Fox Run Rd., Lakewood, Colorado, 80228. The light rail stops some 200 yards north of the Environmental Training Center. The workshops begin at 9:00 am on both days. Both workshops will finish at 4:30 pm on the first day and at 4:00 pm on the second day. We would ask that you arrive by 8:30 am on the first day of either workshop so that we can deal with registrations prior to our start. Venue information will be emailed to registrants. Workshop attendees receive a copy of Dr. McKenzie-Mohr's book, "Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing (3rd Edition)" at the event. Lunch on both days is included in the registration fee.

Additional Information and Registration:

<https://register.cbsm.com/workshops/denver-colorado-2014>

As a reminder to anyone holding an AEE certification:

Each certified professional is required to obtain Continuing Education Units (CEU) or Professional Development Hours (PDH) each renewal period. AEE does not maintain a record of your continuing education in the interim so you must maintain your own record of continuing education and complete a recertification form at the time of your renewal. A total of 10 renewal credits are required utilizing a combination of the following:

- Employment in energy activities
- Membership in a professional organization
- Office held in professional organization
- Continuing education (courses, seminars)
- Energy conference attendance
- Professional awards or published/presented papers

For more information, examples of how to tabulate credits, and how contact hours (CEUs, PDHs, etc) are converted to AEE credits see

<http://www.aeecenter.org/i4a/pages/index.cfm?pageid=3771>



Sustainability in Centennial

Consistent with the IKEA commitment to sustainable building practices and operations when feasible, this store reflects many elements such as those identified below.

Renewable Energy

- Geothermal for heating and cooling the building (no gas connection to store)
- Geothermal for pre-heating domestic hot water, and for refrigeration in the Exit Bistro
- Geothermal for snow melting on north side driveway of building
- Solar photovoltaic electricity for building and dock levelers

Energy Conservation

- LED site lighting and some building signage
- Building management system to control HVAC and lighting
- Skylights in warehouse to use natural light for illumination
- Solar tracking skylights to maximize daylight in select areas
- Only compact fluorescent bulbs available for sale in store
- Chargeable forklifts

Water Conservation and Management

- Motion sensor toilets and faucets, as well as waterless urinals
- Sand filter basins to pre-treat stormwater for quality control
- Detention ponds for managing water flow to public system

Waste Management

- Recycling of cardboard, glass, paper, plastic, wood and metal
- Food waste recycling (with a vision to compost also)
- No plastic bags as part of checkout process
- Products made using innovative waste or recycled materials

Miscellaneous (Air Quality, Land Use)

- Low VOC (volatile organic compound) paint
- Smart packaging of products & flat-packing of furniture to save truck trips and to minimize resource consumption
- Vertical store on a smaller parcel (no at-grade parking field)
- Hand dryers to replace paper towel consumption



Solar Energy

IKEA Centennial has the largest single-use commercial rooftop solar project in Colorado.

The 60,000-square-foot array consists of a 498-kW system, built with 2,212 panels. IKEA Centennial's solar program will produce approximately 740,000 kWh of electricity annually, the equivalent of reducing at least 564 tons of carbon dioxide (CO₂), eliminating the emissions of 100 cars or powering 62 homes yearly. (Clean energy equivalents based on EPA's energy resources calculator.)

The project will contribute to the local utility's renewable portfolio goals and lower the electrical grid's carbon intensity.

Geothermal Energy

IKEA Centennial includes the first geothermal project in the United States for IKEA, and will rely on the heat pumps that sit below the ground using the even temperature to heat and cool a building's interior. The ground-source heat pump system is designed to meet the new store's heating, cooling and hot water demands. The IKEA Centennial geothermal project is the state's largest commercial building utilizing this type of technology.

Geothermal systems involve drilling holes – for this project 130, each at 5.5 inches in diameter and 500 feet deep – into the earth to install piping filled with heat-transferring liquid that circulates through underground loops and through special equipment to either warm-up or cool-down the temperature inside the store. The depth of the holes was determined based on soil conditions, thermal conductivity tests and the large amount of liquid needed for the heating and cooling loads of the 415,000 s.f. store.





Advanced Facilities Management and Engineering
Conference and Exhibits



[\(Click the Picture for more information\)](#)

Colorado Energy Events

If you know of other upcoming events that should be listed in this calendar, please contact Dan Sachse at dan.sachse@xcelenergy.com

Organization	Event	Location	Date	Contact
RMAEE	May IKEA Tour	IKEA	May , 2014	http://www.rmaee.org/
CRES	NCRES Series: A Geobgist's View of Living Sustainably in a Changing Climate	Odell Brewery	May 20, 2014 7-9pm	http://www.cres-energy.org
CCIA	Save The Date Energy Connections	Denver Chamber of Commerce	May 22, 2014 7:30- 9am	http://coloradocleantech.com

Colorado Governor's Energy Office:
<http://www.colorado.gov/energy/>

ASHRAE
<http://www.ashrae.org/>

Rocky Mountain Electric League
<http://www.rmел.org/>

IEEE
<http://www.ieee.org/portal/site>

Colorado Renewable Energy Society –
<http://www.cres-energy.org/events>

Solar Energy International -
<http://www.solarenegy.org/workshops>

Mechanical Engineer - Project Manager - Denver

Responsible for evaluation and investigation of existing mechanical systems, analysis of building performance, and retrofit design applications. Work includes: condition assessment of building mechanical, electrical, and plumbing systems to identify remaining useful life and replacement costs, energy audits and development of energy conservation projects to reduce consumption and cost, and assessment to improve building performance and/or achieve points for sustainability certification.

Requires BS in engineering, PE, 7+ years experience, good technical, verbal and written communication skills, and willingness to travel. Ability to work independently and develop business.

Recruiter working on this open position.

All responses confidential. None of your information will ever be given out without you knowing the name of the company. The company is known for taking care of their employees. This is a direct hire by the company. Please send your confidential resume and a good time to talk to Rob.

solutionswest@kendra.com