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Monthly Lunch Meeting

November 19, 2009

How's and Why's of Variable Frequency Drives

John Brocko will cover the when, why and how to apply a Variable Frequency Drive. His presentation will include what to look for as key reasons to use a VFD, examples of energy savings potential, the basics of a VFD design and how it works. Application and installation considerations including reliability, noise and power quality concerns will also be addressed.

Topics that will be covered include: VFD versus Soft Starter versus across the line starting, Constant torque versus Variable torque loads, Affinity laws, 6 pulse and 18 pulse designs, harmonics and harmonic mitigation, power factor, reflected wave reduction and motor selection, noise, input protection, VFD bypass, motor overload protection, and network connections.

John is an electrical engineer with over 10 years of power conversion equipment manufacturing, design and testing experience. For the past two years he has worked as an applications engineer and product specialist for Rexel Electric Supply, the Allen Bradley distributor partner in Colorado and Wyoming.

When: Thursday Nov. 19, 2009 11:00 a.m. – 1:00 p.m.

Where: Indian Tree Golf Course Clubhouse
7555 Wadsworth Blvd, Arvada, CO 80005

Cost: \$20 for chapter members, \$30 for non-members

RSVP: [Steve Kutska](#) by November 17, 2009

Letter from the President

Our annual Energy Forum was a big success last month. This year's topic, "The New Energy Economy", and our many informative speakers were a strong draw bringing in around 75 attendees. Each presenter explained an aspect of this "New Energy Economy"; what the term means, how it is impacting the state, communities and businesses and how these improvements can be paid for. I'd like once again to extend my thanks to all of our presenters: Joel Asrael and Morey Wolfson with the Governor's Energy Office, Jeff Hohensee of Natural Capitalism Solutions, Judy Dorsey from Brendle Group, Derek Shockley. Mark Shoenheider and Sandy Simon from Xcel Energy, Sue McFaddin of Seven Generations, Ed Keegan representing Denver International Airport, Patrick Hilleary with Brookfield Properties, and Geoff Culm from Bank of America. We couldn't have pulled off the event without the generosity of our host Tri State and our corporate sponsors. Thanks again. If you missed the forum or would like copies of any of the presentations they are available on the RMAEE website under the "Members Corner".

Having just completed this year's forum it is hard to think about next year's. But to ensure we provide value to our members your RMAEE Board tries to start planning early. And the first step is to ask you, our members, for feedback. What did you like or dislike about the forum? What topics would you like to see focused on for our next event? RMAEE tries to provide its members with pertinent information on energy technologies and the energy industry. With your input we can make sure we succeed at this goal.

And along those lines, this month's meeting will focus on Variable Frequency Drives. John Brocko with Rexel Electric Supply will be on hand to tell us all about these devices, how they work and the proper application to save energy. We look forward to seeing you on November 19th.

Sincerely,

André Guoin
RMAEE Chapter President

Upcoming Events

November 19 Lunch Meeting; Indian Tree Golf Course 11:00 a.m. to 1:00 p.m.
December 10 (new date) Holiday Mixer; Indian Tree Golf Course 4-7 p.m.

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's time to renew for 2010!

- RMAEE Membership Fees for 2008-09 year are due in September. The RMAEE annual fee is[*1] \$50/person, unless you hold a National AEE membership. For National AEE members the RMAEE annual fee is \$40. Local membership gets you the discounted (member) meeting prices through out the year[*2]. 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 Annual Corporate Membership. Each annual pre-pay of \$220/ACM receives one free lunch meeting.

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
550 15th Street, Suite 700
Denver, CO 80202
Fax 303 571-7877
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
- Prepay for \$220 for the year including chapter dues. (Make sure to include your Company's name on the application form.)
- Annual Corporate Membership; \$220/membership. Price includes all fees for one year and one free lunch/ACM.

Name _____

Company _____

Address _____

City, State, Zip _____

Phone _____

Email _____

Credit Card Information ___ Master Card ___ Visa

Card Number _____

Expiration Date _____

Name as it appears on card _____

Number of Annual Corporate Memberships: _____



Advanced Facilities Management & Engineering Conference and Exhibits
Denver Merchandise Mart Expo Hall, Denver CO

REGISTER BY **NOVEMBER 5** AND SAVE!

This year's AFEC dedicated to facilities management and engineering professionals offers a stellar lineup of over 30 educational seminars presented by national and regional speakers. All educational seminars are approved for CPD, CFM, CE, CEU, and FMP maintenance points. Topics presented are in the areas of **Sustainability & Green, Facilities Management, Energy, and Operations and Maintenance**. Register by Nov 5 www.afec.biz

The event now in its 8th year is sponsored by the International Facility Management Association Denver Chapter (IFMA), Building Operators Association of Colorado (BOAC), Association for Facilities Engineering (AFE), Xcel Energy, and supported by Rocky Mountain ASHRAE, Colorado Association for Healthcare Engineers and Directors (CAHED), Alliance for Sustainable Colorado, BOMA Denver, 7 x 24 Exchange, Rocky Mountain Association of Energy Engineers (RMAEE), and U.S. Green Building Council, Colorado Chapter (USGBC).

NEW THIS YEAR: site tours where we will host a tour of downtown LEED EB Gold historic building (Alliance Building) or a LEED new construction Gold building (EPA Region Four Building), followed by a networking reception for the fantastic value of \$35 see website for more details.

The Exhibit and Technical Demonstrations will feature over 100 manufacturers displaying products needed to manage all types of buildings and facilities. Limited exhibit space and sponsorships are still available. Contact Mark or Lynn Cramer 303-771-2000 or lcramer@expomasters.com for more information.

Employment Opportunity

Position Title: Energy Savings Business Development Manager

Location: Denver, CO- ability to work from home

Requirements:

-4 year bachelor's degree, preferably in Marketing, engineering, business

-Prior energy performance contracting experience, minimum of 3 years. Must have prior experience working for an ESCO (Energy Service Company) preferably in an energy related or similar business. Should have 3 years selling to state agencies, cities, counties, universities and community colleges.

-Strong communication and closing skills

-Ability to manage complex sales cycle in a team selling environment with sales values in excess of \$1 million dollars per contract.

-Controls knowledge with an understanding of mechanical and electrical systems and energy performance contracting is a must. (Need to know how to talk the talk).

Basic Functions of the position:

Business Development Manager will fulfill regional and corporate goals of comprehensive energy performance contracting business development. Accountable for market research requirements, identifying high potential leads and the subsequent business development of qualified leads to prospects and customers. This role requires key input into achievement of revenue goals and customer satisfaction goals and opportunity tracking in Rocky Mountain region. The purpose of this position is to help institutions and businesses save energy and money while creating comfortable, productive, and safe learning, working, and living environments. This position will be responsible for helping going green by designing and installing facility energy efficiency improvements that make financial sense through guaranteed energy savings for institutions and companies.

Key Responsibilities:

-Interact with the engineering and operations teams to collect site data and evaluate responses to identify specific energy conservation measures and methodology.

-Maintaining contact and customer awareness of process. Act as liaison between customer and all facets of firm.

-Close sales

-Presentation development- preparing and delivering marketing presentations. Tailor the value proposition to specific needs and applications of the prospect.

-Facilitate the development of projects by guiding a team of engineers and proposal developers

-Finding and cultivating potential business opportunities. Establish account strategy, conducting introductory calls, letters and setting up appointments.

-Qualifying potential leads and turning them into opportunities.

Please submit resume to Brent Wardell, bwardell@pegstaff.com or call 303-781-2140.



Request for Proposals Posted:

Weatherization Training and Technical Assistance Services

The Governor's Energy Office (GEO) has posted a Request for Proposals (RFP) on the Colorado state procurement system. The solicitation can be found by [clicking here](#) and selecting "Governor's Energy Office".

The GEO is accepting proposals from entities that can provide weatherization training and technical assistance services to the GEO Weatherization Program partner agency personnel. Training will result in the certification and/or competency assessment of participants for specific training components. Respondents to this RFP should address all training components. Offerors that do not have expertise in each training component are encouraged to seek qualified partners.

Funding for this work is provided by the American Recovery and Reinvestment Act (ARRA) of 2009.

Potential vendors that would like to offer services to the GEO, or other state agencies, should register with the state procurement system. By doing so, vendors can review all competitive purchases conducted by state agencies, institutions, and colleges, and review and download the Invitations for Bids (IFB), Requests for Proposals (RFP), and Documented Quotes (DQ) directly from the site. Vendors can also sign up to receive notifications of solicitations sent directly from the system.

Please note that GEO staff cannot discuss this solicitation with any entity that intends to submit a proposal. Refer to the solicitation for information about how to submit questions regarding this opportunity.

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 |
|--|--|--|----------------------|---|
| Rocky Mountain Association of Energy Engineers | November Lunch Meeting | Indian Tree Golf Course 7555 Wadsworth Blvd Arvada | Nov 19 | http://www.rmaee.org |
| Rocky Mountain Association of Energy Engineers | December Holiday Mixer | Indian Tree Golf Course 7555 Wadsworth Blvd Arvada | Dec 10 | http://www.rmaee.org |
| Rocky Mountain ASHRAE | Jim Schreiber with Shamrock Sales will be speaking on Commercial Solar System Design | Dave and Busters 2000 S. Colorado Blvd. | Nov 4 | Rocky Mountain ASHRAE Monthly Dinner Meeting |
| Rocky Mountain Association of Energy Services Professionals | Energy Hour | Rio Grande Restaurant 1101 Walnut Street Boulder | Nov 4 5:30 to 7 PM | mailto:rmaslowski@summitblue.com |
| Sustainability Campus Program | Auraria Campus Sustainability Fair | Auraria Campus Downtown Denver | Nov 12 10 AM to 3 PM | http://www.sustainableauraria.org/ |
| Advanced Facilities Management & Engineering Conference and Exhibits | | Merchandise Mart I25 and 58 th Ave | Nov 12 and 13 | www.afec.biz |
| Colorado Renewable Energy Society | Monthly Meeting Alternative Transportation Options | Red Rocks Community College 13300 West 6 th Ave | Nov 19 7 PM | CRES Monthly Meeting Flyer09 |

Colorado Governor's Energy Office:

<http://www.colorado.gov/energy/>

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

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

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