I wanted to start out by relaying very good news to all our members. First, we have a new Vice President for 2015! Fred Yebra has graciously stepped up to fill the long void on our Board. Fred is currently working for the State Energy Conservation Office after retiring from the City of Austin and Austin Energy.

Second, we have received full payment for all the CEM students from last year that will greatly help our reserve account and hopefully the Chapter’s charitable and community efforts moving forward.

Last month’s meeting at the Park Restaurant at the Domain was very well attended. Thanks to Ryan Thompson, Maintenance Manager, Utilities and Energy Management, University of Texas at Austin for his presentation and tour of the Chilled Water Storage system at UT’s Pickle Campus.

Please join us on Tuesday, February 24th at the Stassney Lane and I-35 Texas Land and Cattle Restaurant in Austin for this month’s lunch presentation Meters to Models: Using Residential Smart Meter Data to Predict and Control Home Energy Usage. Our presenter will be Krystian Perez, a PhD student in chemical engineering at the University of Texas at Austin.

Finally, Please remember that in an effort to keep our monthly Chapter meetings informative, we will buy the member’s lunch that recommends a future speaker.

Have a great month,

Frank Richards
Austin –San Antonio AEE Chapter President

26th Annual GLOBALCON
March 17-18, 2015
Presented by the Association of Energy Engineers (AEE)

www.GLOBALCONevent.com

Conference - Expo - Networking - Free Events
February Speaker

Krystian Perez
PhD student in chemical engineering at the University of Texas at Austin

Krystian Perez is a PhD student in chemical engineering at the University of Texas at Austin working under Drs. Edgar and Baldea. He earned his B.S. degree in chemical engineering from Brigham Young University in Utah. He is interested in developing residential neighborhood models based on the human activity patterns, weather trends and first principles of an individual home. From this model he would like to determine the most efficient means to control electric loads, use alternative energy sources (e.g. photovoltaics) and energy storage devices (e.g. thermal storage tanks) to mitigate peak energy demand at the level of an entire residential community. He has worked with smart meter data from Pecan Street Research Institute.

February Presentation

Meters to Models: Using Residential Smart Meter Data to Predict and Control Home Energy Usage

Access to smart meter data in the United States presents an opportunity to better understand residential energy consumption and energy-related behaviors. Air-conditioning (A/C) use, in particular, is a highly variable and significant contributor to residential energy demand. Most current building simulation software tools require intricate detail and training to accurately model A/C use within an actual house. However, integrating existing modeling software and empirical data has the potential to create highly portable and accurate models. Reduced-order models (ROM) are low-dimensional approximations of more complex models that use only the most impactful variables. In this paper, we report on the development of ROMs for 41 physical houses in Austin, Texas, using smart meter data. These models require outdoor dry bulb temperature, thermostat set points and A/C energy use data to regress model coefficients. A non-intrusive load monitoring technique is used to disaggregate A/C electricity consumption from whole-house electricity data reported by smart meters. Thermostat set points are provided by smart thermostats. Once trained, the models can use thermostat set points and dry bulb temperatures to predict A/C loads. The ROMs are used to evaluate the potential of automated thermostat control to reduce the aggregate peak demand. A centralized model predictive controller reduces the aggregate peak load by adjusting the thermostat set points to pre-cool houses and staggers the time A/C units turn on.

http://www.che.utexas.edu/2014/06/13/grad-student-krystian-perez-wins-energy-research-fellowship/

Presentation May Be Downloaded At:

Can't make it to the meeting??...not to worry....

At 11:45 am, please call in at: 1-860-970-0300, participant access code 157500 #

Participants please DO NOT PLACE PHONE ON HOLD (or we all will hear your music). It would be a good idea to MUTE your line after you get in. Please press * 6 to MUTE. When you want to talk, then UNMUTE by pressing * 6 again, and then you can talk. This will lower background noise on the conference line.

If you attended remotely, please email Linda.Rickard@AustinEnergy.com to let her know you attended the web presentation. She will add your name to the roster.
On The Scene

Photos by Miles Abernathy

Our January chapter meeting was held at the Park Restaurant in Austin, TX along with a tour of the Thermal Storage Tank/HVAC Plant that serves the Stampede Super Computer which is located at the JJ Pickle Research Center. THANK YOU Ryan Thompson for a great presentation and tour of the facility!!!

Need Directions to Meeting??

**Directions Coming from Austin:** Head south on I-35. Take Exit #229 – Stassney Ln. Make a right at the traffic signal at Stassney Ln. Go 0.1 miles. Take a right at the Lowes/Fiesta driveway entrance. Texas Land & Cattle parking lot is first entrance on the right.

**Directions Coming from San Antonio:** Head north on I-35. Take Exit #228/229 – Wm. Cannon Dr./Stassney Ln. Pass straight through the traffic signal at Wm. Cannon Dr. Make a left at the traffic signal at Stassney Ln. Go 0.2 miles. Take a right at the Lowes/Fiesta driveway entrance. Texas Land & Cattle parking lot is first entrance on the right.

Newsletter Comments? Contact: Bruce Dschuden at badschuden@gmail.com
2015 Calendar

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<thead>
<tr>
<th>Month</th>
<th>Subject</th>
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<tr>
<td>February</td>
<td>Meters to Models: Using Residential Smart Meter Data to Predict and Control Home Energy Usage</td>
<td>Austin, TX</td>
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Do you know of a technology or a tour that would be of interest to our chapter membership? The board of directors welcomes your ideas and thoughts. Our chapter is only as good as the membership makes it...it is your chapter, please participate and provide input into the selection of presentations and tours! If your recommendation is used...it’s good for a free lunch for you!

Contact Frank Richards FrankRichards@BeeUSA.com with your ideas!

Understanding Engineers...Take 2

Engineers Explained

Powers of Concentration

If there is one trait that best defines an engineer it is the ability to concentrate on one subject to the complete exclusion of everything else in the environment. This sometimes causes engineers to be pronounced dead prematurely. Some funeral homes in high-tech areas have started checking resumes before processing the bodies. Anybody with a degree in electrical engineering or experience in computer programming is propped up in the lounge for a few days just to see if he or she snaps out of it.

http://local.texaslandandcattle.com/

Texas Land and Cattle Steakhouse
5510 S. IH35
Austin, TX 78745

February Meeting Location:
Our Mission:

◊ Advance the professional careers and the common purposes of its members. Facilitate networking, social exchange and training.

◊ Present and discuss energy, environmental topics, and members’ ideas. Stay abreast of fast changing developments. Anticipate their future.

◊ Disseminate information to the trade and to the general public via meetings, publications, trade shows and presentations.

◊ Build an exciting, expanding chapter

◊ Cooperate with other AEE chapters and related organizations.

◊ Promote energy efficiency.

2015 Officers

Table:

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<tr>
<th>Name</th>
<th>Position</th>
<th>Email</th>
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<tbody>
<tr>
<td>Frank Richards</td>
<td>President</td>
<td><a href="mailto:FrankRichards@BeeUSA.com">FrankRichards@BeeUSA.com</a></td>
</tr>
<tr>
<td>Fred Yebra</td>
<td>Vice President</td>
<td><a href="mailto:fred.yebra@cpa.texas.gov">fred.yebra@cpa.texas.gov</a></td>
</tr>
<tr>
<td>Karma Nilsson</td>
<td>Treasurer</td>
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<tr>
<td>Linda Rickard</td>
<td>Membership</td>
<td><a href="mailto:Linda.Rickard@austinenergy.com">Linda.Rickard@austinenergy.com</a></td>
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<td>Norman Muraya</td>
<td>Scholarships</td>
<td><a href="mailto:Norman.Muraya@austinenergy.com">Norman.Muraya@austinenergy.com</a></td>
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<tr>
<td>Bruce Dschuden</td>
<td>Newsletter</td>
<td><a href="mailto:bdschuden@Invinc.com">bdschuden@Invinc.com</a></td>
</tr>
<tr>
<td>Miles Abernathy</td>
<td>Historian/Photographer</td>
<td><a href="mailto:miles99@gmail.com">miles99@gmail.com</a></td>
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Join Us at Our Next Meeting!

Date: 24 February 2015
Time: 11:30 – 1:00
Location:
Texas Land and Cattle Steakhouse
5510 S. IH35
Austin, TX 78745
512.442.6448

www.txaee.org

We’re On The Web!!

Follow us @TXAEE!
MEMBERSHIP INVOICE
Austin/San Antonio Chapter of the Association of Energy Engineers
http://www.txaee.org

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Local Chapter Dues for 2015 $ 30.00

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Please fill out the following information.

Name: ____________________________________________

Company: _________________________________________

Address: _________________________________________

City/State/Zip: ___________________________________

Business Phone: _________________________________

FAX: __________________________________________

E-mail Address: _________________________________

Suggested Speaker Topic or Tour: _________________________

Chapter meetings typically are held the 4th Tuesday of each month at 11:30 a.m. Location for the meetings is posted on the Austin/San Antonio AEE Web Site http://www.txaee.org/calendar.htm. Look forward to informative, professional, and educational presentations in the energy field, plus field trips to various locations in Austin and San Antonio.

Remit to: Austin AEE
PMB 287
815-A Brazos Street
Austin, TX  78701-2509

For inquiries regarding this invoice please contact:
Karma Nilsson at 210-353-2815 or knilsson@cpsenergy.com

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