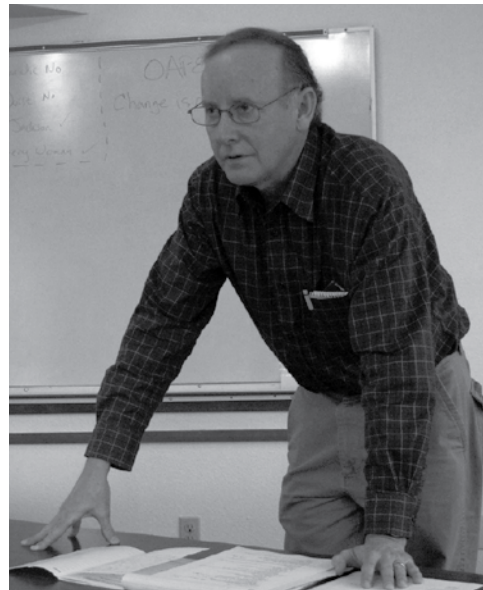


Mission Statement: To advance the understanding and practice of sound energy and resource management principles, and to provide a network among business, government, and utilities for information, education, and leadership.

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PRESIDENT'S CORNER



As your new president for 2009, I feel very excited and privileged to be leading Oregon APEM at this time. There is a lot happening in the fields of energy conservation and sustainability, and we plan to do our best to help our members stay abreast of the important energy issues of today. It has been a long time since our country has had a President that fully supported conservation. Energy managers have a very important role to play in creating a new brighter future.

I am joined on the Oregon APEM Board this year by our Vice President-Kellee Jackson, Treasurer-Brandon

Adams, Secretary-Elin Shepard, continuing Board members: Dave Cone, Don Holland, Matt Daly, Rick Durst, SaraHope Smith, and new Board members: Christie Sphoon, Jessica Rose, and Rich Davis. Also joining the Board this year are 2 student Board members: Matthew Rosenfield from OIT and Andy Kuss from LCC.

I am also hopeful our membership will grow this year and that all our members will contribute to making Oregon APEM again the strongest chapter of APEM in the nation. We look forward to your feedback about our Forums.

David Christie

President, Oregon APEM



Oregon Association of Professional Energy Managers

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In the 21st century, we know that the future of our economy and national security is inextricably linked with one challenge: energy... To control our own destiny, America must develop new forms of energy and new ways of using it. And this is not a challenge for government alone-it's a challenge for all of us.

President Barack Obama

WHAT IS NET-ZERO AND HOW DOES IT RELATE TO THE 2030 CHALLENGE?

The 2030 Challenge was developed as a response to global warming and the ever increasing release of greenhouse gases into our environment. The goal is to design and build structures that create as much energy as they use and release no net greenhouse gases to the environment. This is referred to as "Net-Zero". This is different from LEED and other sustainable or green building standards; this goal cannot be achieved without actual reductions in energy use. A "Net-Zero" design must dramatically reduce or eliminate the use of fossil fuels.

The road to energy independence, economic recovery and reductions in greenhouse gas emissions runs through the Building Sector.

Edward Mazria

Because it had become increasingly obvious in the early years of the 21st century that "business as usual" would not provide solutions to global warming, let alone provide them in time, in May of 2007 the American Institute of Architects (AIA), American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE), and the Illuminating Engineering Society of North America (IESNA) along with other groups came together to issue a challenge to their members. The challenge is to design buildings so that by 2030 all new buildings will release no net carbon to the environment. This is especially significant for two reasons. First, this challenge has not been issued by a fringe group, this challenge has been adopted by the professional societies that the designers who create our buildings aspire to join. Second, besides just issuing an end goal they have also set intermediate targets that are increased every five years forcing technology to be developed and leap frog to meet the challenge.

The immediate target is buildings that use 50% less energy than the normal code building. The first increment is a 60% energy use reduction for new buildings by 2010. Every five years an additional 10% reduction is required until we achieve net-zero in 2030. How is this even possible? Has anybody met the intermediate targets?

Extraordinary times require extraordinary solutions. Are we up the challenge?

The 2030 Challenge: Reaching Net-Zero

Please join us for the Oregon APEM Spring Forum

Registration:

www.regonline.com/Oregon_APEM_2009_Spring_Forum

When: April 2nd

Where: Gerding Theater at the Armory
128 NW Eleventh Avenue
Portland, OR 97209

Speakers include:

The Good Company: The Significance of Carbon

Better Bricks: Designing for the 21st Century

Mitch Dec, Glumac: The 2030 Challenge, What is it and the Hurdles

Jim Benya, Benya Lighting: Seriously Sustainable Lighting, The Road to Net Zero

Nick Collins, PAE: The Columbian Building, Meeting the 2010 Targets: A Case Study

The event will be catered by Artemis, known for use of local and sustainable products in the preparation of their award winning meals.

A tour of the theater is included emphasizing the elements that helped the "old Armory building" become LEED Platinum certified, the home of Portland Center Stage, and a world class theater.

Climate change is the most important environmental and economic issue of our time.

The unregulated – and unmitigated – emission of CO₂ and other greenhouse gases into the atmosphere is changing our climate, threatening our ecology, keeping us dependent on foreign sources of energy, and – if nothing is done – is a missed opportunity to reinvent our national and state economies.

The consequences of climate change are evident. Not just across this state – but globally.

We're seeing increased temperatures, decreased snowpack, diminishing water supplies, more unpredictable weather patterns, increased risk of forest fires and volatile energy prices – all of which are playing havoc with our environment and economy.

Governor Kulongoski

OREGON APEM 2008 WINTER FORUM: BEYOND HVAC AND LIGHTING

Oregon APEM chose the theme “Energy Management for the 21st Century” as its focus for 2008. To that end ORAPEM’s Winter Forum focused on issues that went beyond the standard discussions on HVAC and Lighting. Elaine Aye (Green Building Services) presented on the challenges of building use on energy management. She pointed to the symbiotic relationship between the energy efficiency of a building and those that occupy it. Communicating those relationships are very important for a building engineer or facilities manager to effectively manage their building. Elaine also shared strategies to get all parties involved and communicating towards the effective management and operations in the common goal of sustainability with the built environment. Diane Shiner (Mahlum Architects) presented on current design trends as they relate to sustainability and energy conservation. In addition, Diane also discussed the importance of post-occupancy studies for building and system designers. Marty Stipe, an Energy Analyst with the Oregon Department of Energy, presented a look at an Industrial Walk-through Audit and guided attendees through Identifying Opportunities and ultimately Finding Ways to Make Good Projects Happen.

Oregon APEM utilizes the Winter Forum as a time to traditionally recognize outstanding work in the energy management field through the Energy Manager of the Year Award(s). The following people received the 2008 Energy Managers of the Year awards at this year’s forum:

- 1) In the Educational category, Oregon APEM gave the 2008 Energy Manager of the Year award to the Northwest Energy Education Institute (NEEI) at Lane Community College. Since 1998, NEEI has been a critical element in the development of the energy efficiency field in our region. The Institute offers educational and training programs which include a two-year degree in energy management, the EMC certification course, Building Operator Certification courses, Sustainable Building Advisor Certification program, and others. Individual recipients were: Roger Ebbage, Erik Westerholm, Elaine Vidal, and Ginny Young.
- 2) In the Utility Category, Oregon APEM presented the 2008 Energy Manager of the Year award to Tim Lammers of Columbia River PUD. Tim was recognized specifically for his work with the recent Scappoose SD lighting upgrade projects.
- 3) In the Utility/Educational Category, the 2008 Energy Manager of the Year award went to Earl Johnson for his work leading the Building Simulation User’s Group (BSUG). BSUG is an educational and peer exchange forum for facility energy analysts that use computer simulation tools. The program is focused on raising the quality of building energy analysis in the Pacific Northwest. Award winners presented on their projects.

2008 ENERGY MANAGER OF THE YEAR AWARDS

The 2008 Energy Manager of the Year (EMOTY) award recipients represented a diverse group of individuals and backgrounds that all strive to increase energy efficiency and energy awareness in Oregon and Southwest Washington.

Utility Energy Manager of the Year

Tim Lammers received the Oregon APEM EMOTY for the Utility Category for his work on the Scappoose School District lighting retrofit projects. Tim helped the district identify, analyze, and secure funding for the lighting retrofits at Otto Petersen, Scappoose Middle School, and Scappoose High School. The retrofits included replacing gymnasium HID lighting with new T-5 linear fluorescent lamps with electronic ballasts, and the classroom T-12 lamps and magnetic ballasts, with new T-8 lamps with

electronic ballasts. All together the projects saved 267,000 kWh per year resulting in \$12,520 in annual cost savings. The total project cost was \$204,246. Tim helped the district secure utility incentives worth \$85,156, BETC Pass-Through incentives worth \$42,078, and a \$56,000 grant through the Oregon Department of Energy’s Williams Oil program. These incentives reduced the net cost to the school district to \$20,990. The simple payback to the district is 1.7 years.

(Continued on page 4)

2008 ENERGY MANAGER OF THE YEAR AWARDS (CONT.)

Commercial and Individual Energy Manager of the Year

Earl Johnson, president, PM Consulting, Chris Galati, Director of Conservation and Technology, NW Natural and Spencer Moersfelder, program manager, Energy Trust of Oregon, won the 2008 Energy Manager of the Year/Commercial and Individual Category. These three individuals were recognized for their work to create the Building Simulation Users Group (BSUG), which seeks to raise the quality of energy modeling in the Pacific Northwest and promote the use of energy modeling as a design tool. The BSUG group meets monthly and creates a peer based forum for the creative exchange of ideas focused on energy modeling lessons learned and best practices.

Education Energy Manager of the Year

Roger Ebbage, Ginny Young, Elaine Vidal, and Erik Westerholm received the Education Award for their roles contributing to the excellence of our local (sometimes national and international) energy professionals. Roger, Ginny, Elaine, and Erik are the engine that powers the Northwest Energy Education Institute, and Lane Community College's Energy Management and Renewable Energy Technician programs. These programs are a core component to training many of our aspiring and renewing energy professionals and provide everything from continued education focused on building operation, certification in energy management, and a pair of Associates of Applied Science degrees in energy management and renewable energy.

It's never too early to be thinking of individuals and projects that you may want to nominate for the 2009 EMOTY awards. Keep those projects in mind and feel free to nominate early. Otherwise, you can look forward to our annual call for nominations later this summer.

BUILDING SIMULATION USERS GROUP



Chris Galati, Earl Johnson, and Spencer Moersfelder (left to right) displaying their 2009 Energy Manager of the Year awards

The Building Simulation Users' Group (BSUG) is comprised of engineers, architects, analysts, contractors and those who are involved in energy conservation on commercial buildings. A meeting is held once a month in an open forum to share knowledge, ideas and professional experience modeling buildings.

Since April of 2006, the once small group has grown to over 300 members and 146 organizations. With a powerful knowledge base resident in the membership, BSUG has been effective at increasing the quality of building modeling and analysis, serving the community and the Pacific NW very well. It is a member-driven group where colleagues volunteer their time to present on a topic and the topics are selected by voting on member generated suggestions. Topics include analytical tools, policy affecting conservation, new building technologies as well as case studies. The presentations are broadcast live to members throughout the PNW and around the country via Webinar. Many members prefer to meet in person and exchange ideas over lunch. NW Natural provides meeting space and Internet meeting capability while the Energy Trust of Oregon provides funding for direct costs. BSUG began by filling a much needed role in the conservation and renewable energy for the community to share knowledge in a collegial environment and with excellent leadership from Earl Johnson, Chris Galati and Spencer Moersfelder, who volunteer much of their time to make it happen, will continue to grow and prosper, serving the community well – onward and upward!

OREGON APEM BOARD RETREAT



The Hand-off, 2008 President Brandon Adams on left passing the presidency to Dave Christie

The APEM Board held their annual retreat in January at the 4-H Center outside of West Salem. The little lodge is surrounded by tall, fir trees and overlooks a quiet pond. It's the perfect location to get the creative juices flowing to plan out the next year of interesting activities and membership benefits.

The Board selected officers for the 2009 year. David Christie 2008's Vice President will serve as President for 2009, and Kellee Jackson was selected as our new Vice-President. Past-President Brandon Adams volunteered to be Treasurer and Elin Shepard remains as Secretary. Even though not all Board members are officers, everyone has an important role to fill.

A large part of the meeting was devoted to brainstorming ideas for the 2009 forum offerings. The Board compiled ideas and suggestions from APEM members, letters to the President, and brainstormed among themselves. All these ideas were combined into subjects for forums. The ones that didn't make the cut this year will become the starting point for next year's brainstorming. The topics are:

- **Spring Forum, April 2, 2009:** The 2030 Challenge: Reaching Net Zero at the Gerding/Edlen Theater (Portland Center Stage) in Portland. This will be a spectacular event featuring presentations on innovative lighting and mechanical system designs, case studies, and greenhouse gas fundamentals. There will also be a tour of the impressive facility. It's a must-attend for anyone in the energy field.



The new President and Vice President hard at work (Left to right, Kellee Jackson, Dave Christie)

- **Summer Forum, June 18, 2009:** Low-cost/no cost improvements. This forum will be a special evening event at Willamette Valley Vineyards in Salem and is open to spouses and adult family members. The topics will include strategies for maximizing improvement dollars, engaging tenants, funding sources, and even a brief discussion around residential options. WVV will be offering wine tasting and information about how they're meeting the Carbon Neutral Challenge. It's not often you can bring the family to an event that combines wine, energy conservation, and fun!
- **Fall Forum, October 2009:** in Portland or Eugene. Demand response, smart grid, load aggregation, peak shaving, interruptible gas, EV storage, dispatchable/localized generation.
- **Holiday Forum, December 2009:** in Portland. Refrigeration, grocery programs, heat recovery, smart controls.
- **Spring Forum 2010:** How are we doing compared to Europe, Energy Code and adoption of technology, Oregon Code Updates and New Programs.

Overall a very productive day, besides creating an exciting schedule for 2009 that will keep us up to date with the best information on energy management and the future of carbon and the energy market in Oregon, the group also had a lot of fun. Stay tuned for the results of their hard work in your inbox or mailbox soon.

MEET THE NEW BOARD MEMBERS



Business Sector Project Manager–Jessica Rose comes to Energy Trust from a Portland-based startup company that holds patents and prototypes on energy-efficient technologies. As project manager there, she led market research efforts on the benefits that energy-efficient technologies hold for reducing greenhouse gas emissions. Jessica is

in her second year at Energy Trust, as Business Sector Coordinator for the New Buildings and Existing Buildings programs. She manages the Green Investment Fund and recently led the development of a financial tool to help business owners to evaluate the overall investment in energy efficiency. Jessica has a B.A. in Environmental Studies from the University of Oregon, and recently completed coursework to become a Certified Sustainable Building Advisor.



Left to Right: New Board members Rich Davis and Christie Sphoon in discussion with Matt Daly

Rich Davis received a BS in Energy Engineering Technology in 1990 from the Rochester Institute of Technology. He has worked as an energy engineer and project manager in New York, Vermont, Texas, California and Oregon. He lives on 2 acres in rural Beavercreek with his wife and 13-year old step-daughter. In his spare time he likes to read science fiction and hike in the woods.

ENERGY TRUST IS RACKING UP AWARDS

Even after racking up all these awards, Energy Trust of Oregon is increasing incentives for 2009. Are you looking out for your clients, are they getting their share on your projects? Find out how, visit the Energy Trust Web site, www.energytrust.org or call 1-866-368-7878.

2008 Excellence in ENERGY STAR Promotion Award for Commercial Food Service Campaign*

*In 2007 247 restaurants and food service organizations purchased 398 pieces of high efficiency equipment, saving 190,000 annual therms of natural gas and nearly 1.2 million annual kilowatt hours of electricity.

2008 Excellence in ENERGY STAR Promotion Award for Change a Light, Change the World fundraiser*

*In 2007 35 schools and organizations sold 7,522 CFLs, saving 379,791 kilowatt hours annually and earning over \$14,000.

2008 Energy Manager of the Year Award

Given to: Spencer Moersfelder, Energy Trust, Earl Johnson, PM Consulting, Inc., and Chris Galati of Northwest Natural.

(Awarded by the Oregon Association of Professional Energy Managers APEM) Spencer was recognized for his work to create the Building Simulation Users Group (BSUG).

2008 Oregon Lodging Association's Stars of Industry Awards

Lynn Schmidt (Lockheed Martin-existing Buildings) received the Industry Partner of the Year Award.

ENERGY MANAGEMENT: THE NEXT GENERATION

Oregon has some of the top energy education programs in the nation. As part of our Oregon APEM Newsletter we are seeking input from the different programs in the state. This edition we are featuring the Renewable Energy Engineering Program at Oregon Institute of Technology and also have a student profile from the award winning Energy Management Program at Lane Community College.

Oregon Institute of Technology



OIT Student Board Member Matt Rosenfield

The Oregon Institute of Technology is leading the way in training a workforce that will be instrumental in the forging of the new energy industry in the United States. In 2005, Oregon Tech introduced the first Bachelor of Science in Renewable Energy Systems in North America (now known as Renewable Energy Engineering). The program started out with only four students, and with the ever increasing interest in energy in the U.S., has since exploded up to 93 students.

The degree program begins by establishing a solid foundation of physics, chemistry and mathematics, which pave the way for coursework in electrical and mechanical engineering. Upper-division courses in renewable-energy specific courses include photovoltaics, energy management and auditing, wind power, biofuels, renewable-energy transportation systems, green building and fuel cells. The Renewable Energy curriculum prepares graduates for engineering careers in the energy sector in general, and renewable energy in particular.

Graduates of the program will be prepared for graduate study or for immediate employment as field engineers, energy auditors, renewable energy system integrators for homes and businesses, manufacturing engineers for component and subsystem manufacturers, designers for components and subsystems, local and state government renewable-energy inspectors, planners and other positions in the energy field.

OIT has also recently introduced a Bachelor of Science in Environmental Sciences where students can choose from three emphasis areas to further develop specific areas in watershed science, Geographical Information Systems (GIS), or sustainable technologies. Additionally, OIT has targeted 2010 for the opening of a Master of Science in Renewable Energy Engineering program.

Another point of interest at Oregon Tech is the recent forming of the OIT chapter of Oregon APEM at the Portland campus. The students involved have secured a faculty contact, chosen officers, and established a charter. The officers of the OIT APEM are currently in the process of securing funds from OIT and establishing a budget for the chapter. Also, the faculty contact, Tom White, has lined up OIT APEM's first guest lecture which will be on "Troubleshooting energy efficiency problems in buildings" and will be held on March 9th.

Well, that's the word for now from the OIT Owls. We will be sure to keep you informed about what's happening at the Pacific North West's new hottest center for higher learning.

Lane Community College

Student Profile:

Nathan Howard, LCC Energy Management Program

This is an exciting time to be a graduating energy management student. In LCC's 2 year Energy Management Program we have been exposed to basic energy principles, energy control strategies, energy accounting, HVAC & lighting technology and considerations, resource issues, and how to analyze and present our findings and recommendations. Through my past experience in analysis and this program I've had the good fortune to intern with BPA & EWEB on a pilot project examining plugloads in office settings, and with 4J School District examining energy use patterns, establishing a regular reporting schedule and presenting energy data confirming that recent retrofit projects have resulted in real savings to the District. My previous background is management, data analysis and solar thermal. I look forward to creating a career in energy analysis and resource conservation.



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