



Oregon Association of Professional Energy Managers

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.

TABLE OF CONTENTS

Winter Forum
Announcement..... 1

President’s Corner 2

Oregon APEM 2008
Winter Forum..... 3

Energy Efficiency
Working Group..... 3

Solar Highway 3

Fall Forum 2008 Re-Cap 4

Energy Trust New Buildings
Program Transition 4

Building Operators
Certification 5

Federal Solar Tax
Credits Extended..... 5

Community Renewable
Energy Feasibility 6

Solar Roof Tour..... 6

Answering The Oregon
Challenge: Climate Change 7

Energy Trust + NW Trade
Ally Network Lighting
Road Show..... 7

WINTER FORUM ANNOUNCEMENT

Continuing the year-long focus on “Energy Management for the 21st Century,” Oregon APEM’s Winter Forum examines issues that take us beyond the standard discussions on HVAC and Lighting.

Elaine Aye (Green Building Services) describes how building use negatively impact energy management and conservation efforts. Poor building design and ineffective operations or scheduling can prevent a building from operating as designed, but sometimes it is tenant activity that frustrates the best-laid plans. Elaine Aye notes there is a symbiotic relationship between the energy efficiency of a building and those that occupy it, and communicating this relationship is a vital task for the effective building engineer or facilities manager.

Elaine will share cases studies of projects that involve tenants and building owners/managers that are either seeking LEED certification for Commercial Interiors in buildings that are not green to building owners seeking Existing Buildings certifications and need their tenants to participate in the process. She will uncover processes and 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) will focus on current design trends as they relate to sustainability and energy conservation. Recent sustainable project completed include: Providence Newberg Medical Center, the nations first LEED Gold Hospital; Pacific University Burlingham Hall the first LEED Gold Student Housing project West of the Mississippi and Lake Washington SD’s Ben Franklin Elementary School a national top ten AIA Committee on the Environment award winner. Diane will discuss how current projects on the boards strive to take the next step towards other benchmarks including LEED, the AIA 2030 Challenge and the Living Building Challenge.

Marty Stipe, energy analyst with the Oregon Department of Energy and Mechanical Engineer with more than 20 years’ experience, closes the Winter Forum with a look at an Industrial Walk-through Audit. Marty shares some techniques on Identifying Opportunities and, ultimately, Finding Ways to Make Good Projects Happen.

Our Winter Forum is also when we take time to recognize outstanding work in the energy management field through our Energy Manager of the Year Award(s). As usual we have a number of fine candidates. Come and see who won!

Of course, beside the presenters and awards, we will also have door prizes and opportunities for networking. Please join us!

You can register at the door or on line at: https://www.regonline.com/63361_675833N

Sincerely,
Brandon Adams, *Oregon APEM President*



Oregon Association of Professional Energy Managers

P.O. Box 6764
Portland, OR 97228-6764

PRESIDENT'S CORNER – WINTER 2008



As the year, and my term as President are coming to an end I find myself reflecting on the past year and our accomplishments and successes as an organization. This year brought several new faces to the board, bringing many new ideas and fresh perspectives to the organization. At the start of the year the board decided that a themed approach to the year's forums would be a nice way to present a broad range of current and emerging topics related to the energy efficiency industry.

Additionally, by providing a broad range of perspectives and information to you, we are hoping to forge new networks and relationships as well as fertilizing existing relationships.

This year we have had three forums with the fourth scheduled for December 4th, in Portland at the Kennedy School.

Our first forum of the year was titled "Innovative Commercial HVAC" and was held at McMinnville Water and Light in McMinnville, Oregon. We were fortunate to have a broad spectrum of expertise to share case studies of projects that utilized premium efficiency heat pump technologies. Also highlighted was the wastewater affluent heat pump project that McMinnville Water and Light implemented in 2000. Following the presentations, staff from the utility guided interested members on a tour of the facility.

The Summer Forum, our second of the year, was held in downtown Portland at the World Trade building. The forum's focus was "Keeping Your High Performance Building Performing". This forum shifted the focus from high efficiency equipment and systems, to strategies for base lining energy use and tracking the performance of energy efficiency projects. The forum included a multitude of speakers representing the utilities, national labs, government, K-12 schools, and the vendors. Each contingent shared case studies, tools, and strategies that can be employed to baseline building energy performance, diagnose deficiencies and identify opportunities, and track actual post project performance. This forums tour included a street car ride down to the waterfront where APEM members toured the new LEED Platinum OHSU Healing Center.

Our third forum of the year was held in Salem, Oregon at the old historic Mission Mill Museum. Focusing on Peak Oil and Carbon Tracking, this forum highlighted local and national efforts to prepare for the social and economic impacts that we will be faced with as oil and natural gas supplies diminish. Furthermore, presenters shared information regarding regional and national efforts to baseline and track greenhouse gas emissions. We also learned about the regional and national efforts to that are currently taking shape to develop a "Cap and Trade" market that will be used to require larger emitters to reduce and/or offset their carbon emissions. I would be remiss if I failed to mention

that our Keynote speaker was Secretary of State Bill Bradbury whom presented an Inconvenient Truth based on Al Gore's movie and presentation. Secretary Bradbury's version included a local focus that highlighted examples of how climate change is impacting the Pacific Northwest.

The year's fourth forum will be held this December in Portland. Once again we will shift focus to "Energy Efficiency Beyond HVAC and Lights". The intent of this forum is to share strategies perspectives, and projects that can result in reduced energy use, but that do not include the traditional energy conservation measures associated with HVAC and lighting systems. Most of the forum will include commercial building information, but we will have an industrial focused presentation to give you a taste of potential outside of the commercial building arena.

The year has gone by so fast, and I must say that I have greatly enjoyed my time spent as the President of Oregon APEM. I am proud to be part of an organization that is made up of such a broad range of interests and backgrounds that all come together with the common goal of promoting energy stewardship. As we close out 2008 we have maintained a membership of 90 strong, and we have enjoyed a very successful financial year where our annual operating expenditures are within budget and our forums for the year have been cash-flow neutral.

I encourage you to consider renewing your membership with Oregon APEM for 2009. I also ask that you think about your peer groups and consider encouraging individuals that you think would benefit from an APEM membership to sign up. Organizations like ours are critical to the advancement of energy efficiency in our region. It is through organizations like Oregon APEM that the energy efficiency community can network and exchange ideas, successes, and lessons learned.

To conclude, I thank you all for your support to Oregon APEM. I look forward to a strong finish to the year, and I ask you to please give David Christie a warm welcome as our new President for 2009.

Brandon Adams

Oregon APEM President

OREGON APEM 2008 WINTER FORUM

Beyond HVAC and Lighting: Energy Management for the 21st Century

Thursday, December 4th, 2008
McMenamins Kennedy School
5736 NE 33rd, Portland, Oregon 97211
(503) 249-3983 fax (503) 288-6559
kennedy@mcmenamins.com

FORUM AGENDA*

- 7:30-8:15 **Registration** – coffee & pastries
- 8:15-8:30 **Welcome and Introductions** – Brandon Adams, Oregon APEM President
- 8:30-9:30 **The Symbiotic Relationship Between Energy Efficient Buildings and Their Occupants** – Elaine Aye, IIDA, LEED AP, Principal, Green Building Services
- 9:30-9:45 **Network Break**
- 9:45-10:45 **Design Trends for Sustainability and Energy Conservation** – Diane Shiner, AIA, LEED AP, Mahlum Architects
- 10:45-11:00 **Network Break**
- 11:00-12:00 **The Industrial Walk-Through Audit** – Marty Stipe, P.E., Energy Analyst, Oregon Dept. of Energy
- 12:00-1:00 **Buffet Lunch & Networking** – included in the registration fee
- Energy Manager of the Year Awards** – Brandon Adams, Oregon APEM President

**Scheduled speakers at time of publishing.*

ENERGY EFFICIENCY WORKING GROUP

One of the Governor's priorities for the 2009 legislative session will be actions to mitigate the impacts of climate change for Oregonians. He has appointed working groups to advise him in developing proposals cap-and-trade, renewable energy, energy efficiency, "green" workforce training, and transportation.

This group is charged with developing concepts related to energy efficiency in the built environment, specifically in the residential, non-residential and industrial sectors. The group is expected to complete its work by the end of August.

For more information about the project:

<http://egov.oregon.gov/ENERGY/CONS/EEWG/index.shtml>

SOLAR HIGHWAY

On August 7, 2008, Governor Ted Kulongoski, PGE, and the Oregon Department of Transportation announced the installation of the nation's first Solar Highway project. The 594 panel system will produce 104 kilowatt's of power and is expected to generate 112,000 kilowatt hours per year. This will provide approximately 28% of 400,000 kilowatt hours needed to light the interchange throughout a year. This project will cost \$1.3 million and is expected to be completed and generating energy by the end of the year.

For more information about the project:

www.oregonsolarhighway.com

FALL FORUM 2008 RE-CAP



APEM members congregate during one of the networking breaks during the Fall Forum.



Oregon Secretary of State Bill Bradbury presents an "Inconvenient Truth".

This year's fall forum was held in Salem, Oregon at the old historic Mission Mill Museum. Focusing on Peak Oil and Carbon Tracking, this forum highlighted local and national efforts to prepare for the social and economic impacts that we will be faced with as oil and natural gas supplies diminish. John Kaufmann of the Oregon Department of Energy and co-author of the Portland Peak Oil Task Force's report presented sobering information about the current global oil supplies, and the past and future trends of discovery, extraction, and demand. Mr. Kaufmann also discussed the anticipated local and regional impacts that will result as the world's petroleum and natural gas supplies are depleted further while demand for oil and world populations increase.

Following Peak Oil, Bill Drumheller, also of the Oregon Department of Energy, presented information about Oregon's efforts to develop a greenhouse gas inventory and protocols being developed to track carbon dioxide and other emissions. These efforts are anticipated to help Oregon participate in Cap and Trade markets and hold large emitters accountable for their emissions. Mr. Drumheller's presentation provided a foundation for the following presentation that focused on the regional and national efforts that are currently taking shape to develop a "Cap and Trade" market. Sallie Shulinger-Krause of the Oregon Environmental Council presented the recommendations established by the Western Climate Initiative on strategies to develop a regional Cap and Trade system for tracking and reducing greenhouse gas emissions.

I would be remiss if I failed to mention that our Keynote speaker was Secretary of State Bill Bradbury whom elegantly presented an Inconvenient Truth based on Al Gore's movie and presentation. Secretary Bradbury's version included a local focus that highlighted examples of how climate change is impacting the Pacific Northwest.

Be sure to mark your calendar for the upcoming Winter Forum to be held on December 4th in Portland, Oregon at the Kennedy School. The Winter forum will focus on strategies beyond HVAC and Lighting systems that can be employed to reduce energy use.

ENERGY TRUST NEW BUILDINGS PROGRAM TRANSITION

Energy Trust recently re-bid the contract for program management contractor services for the Business Energy Solutions — New Buildings program.

The winning bidder is Portland Energy Conservation, Inc., (PECI) which is partnering with Earth Advantage®, Nexant and SERA Architects to administer the program on behalf of Energy Trust.

The new PMC will replace the current contractor, SAIC, which has held the New Buildings program contract since Energy Trust launched the program in 2004. SAIC has been extremely successful in developing a strong program that has resulted in more than 400 highly-efficient new commercial buildings in Oregon.

Since October 1, 2008, and continuing through the end of December, SAIC and PECI will overlap program activities. Projects that are presently underway will receive the same great service, and new projects will be enthusiastically undertaken. Beginning November 1, 2008, all new projects enter through the PECI team.

PECI will take full management responsibility on January 1, 2009. At this time, Energy Trust and PECI will enter into a three-year contract with an optional two-year extension.

New Buildings will announce program enhancements in the coming months, but the program's core offerings will remain the same.

For more information: visit Energy Trust's Business Energy Solutions—New Buildings program pages or contact Mana Haeri, mhaeri@peci.org, 503-961-6170.

BUILDING OPERATORS CERTIFICATION

Building Operator Certification (BOC®) is a nationally recognized training and certification program for building operators offering improved job skills and more comfortable, energy-efficient facilities.

Building Operators Certification

BOC is a professional development program created by The Northwest Energy Efficiency Council (NEEC), and delivered in Oregon by NEEI. It is designed for operations and maintenance staff working in public or private commercial buildings. It certifies individuals in energy and resource-efficient operation of building systems at two levels:

Level I - Building System Maintenance

Level II - Equipment Troubleshooting and Maintenance

Credit: To become Level I certified, participants must attend seven classes (56 hours), and complete class exams and project assignments at your facility.

To become Level II certified, participants must attend four core classes (35 hours) and two elective classes (14 hours), complete class exams, and assigned projects.

Location: Various locations in Oregon

Schedule: Download the Annual Course Schedule (PDF 24k)

Who Should Attend:

BOC is ideal for operations and maintenance staff working in public or private commercial buildings, including:

- Engineers
- Technicians
- Architects
- Facility, Maintenance and Energy Manager

Energy Management Certification

EMC is an advanced certification program that requires the student to implement an energy-saving project, and measure the results.

This program goes beyond the fundamentals and teaches a broad spectrum of energy management principles and techniques. Topics include building energy use, glazing, insulation, building envelope, heating/cooling, secondary HVAC, controls, central plant equipment, energy auditing, operation and maintenance. Each topic is covered by a discipline expert.

Credit: EMC is significantly more valuable than conventional, testing-based certification programs. Certification from NEEI is proof of actual hands-on experience!

Location: University of Oregon in Eugene. All participants are required to stay in-residence on campus for the classroom portion of the program.

Dates: The 2-wk classroom portion of the 2009 EMC will be held from July 6 to July 17, 2009.

Who Should Attend:

- Engineers
- Technicians
- Architects
- Facility, Maintenance and Energy Manager

Instructors: The EMC course is taught by a diverse staff of energy professionals, each of whom carries the highest credentials within their disciplines.

For more information:

Contact Northwest Energy Education Institute toll-free at: 1-800-769-9687

FEDERAL SOLAR TAX CREDITS EXTENDED

The 30 percent federal tax credit for both residential and commercial solar electric and solar water heating systems has been extended through 2016. Additionally, the credit cap was eliminated for residential solar electric systems. Please note that the \$2,000 credit cap still exists for residential solar water heating systems. Also, remember that solar pool heating systems are not eligible for federal tax credits, either residential or commercial. For more information, visit www.energytaxincentives.org and follow the links for either consumers or businesses.

COMMUNITY RENEWABLE ENERGY FEASIBILITY

Community Renewable Energy Feasibility (CREF) Fund now accepting pre-proposals

The June 2008 Legislative Emergency Board approved the Community Renewable Energy Feasibility (CREF) program to be administered by the Oregon Department of Energy (ODOE).

The CREF fund has been established to support feasibility studies for community renewable energy projects and to encourage development and utilization of Oregon's many renewable energy resources. The maximum award is \$50,000 per study with a 25% match requirement. Program funds may be made available to any entity in Oregon that seeks funding to study the feasibility of a qualifying community renewable energy project. This includes all private and public entities and partnerships thereof. Additional program requirements can be found on the CREF Web site. Our objective is to reduce Oregon's dependence on fossil-based energy sources and to promote sustainable economic development for communities throughout the state.

Pre-proposals are now being accepted and the deadline for submission is 5:00 PM (PDT) Friday, August 22, 2008.

SOLAR ROOF TOUR



When HB3244 passed in the 2007 Legislature, suddenly public sector agencies all over the state began to look at solar in a new way. Beginning Jan. 1, 2008, they now were required to apply 1.5 percent of the construction cost in new buildings or major renovations towards solar panels. While agencies had always thought solar was a nice addition to buildings, it didn't have a good enough pay back to make sense. However, since the bill passed, there have been increases in incentives through the Energy Trust of Oregon and the Oregon Department of Energy. Now solar has become more affordable, but what do we know about it? Not much. State agencies realized that we all had a lot to learn. In the past, some agencies would do

projects, but wouldn't think to share the successes or lessons learned so that other agencies could learn from them. Now, through the help of the Interagency Sustainability Coordinators Network, agencies are talking and sharing this kind of information. In fact, in early July, DAS sponsored a trip to seven different solar installations in Salem and Eugene for interested agency staff. Eleven staff from six agencies toured solar arrays on Kettle Foods in Salem; PepsiCo, Sequential Biofuels, and other carports in Eugene; and even toured some progressive solar installations on the University of Oregon campus. The group was able to see the solar arrays and talk with the maintenance staff about how they've been working, leaks in the roof, and other critical questions. It was an illuminating day of information-sharing and camaraderie. Not to mention lots of sun!

Submitted by: Elin Shepard, Sustainability Coordinator, Oregon Department of Administrative Services and Oregon APEM Secretary

ANSWERING THE OREGON CHALLENGE: CLIMATE CHANGE

Problem: The effects of global warming have serious implications for Oregon's economy and environment. Because of increased carbon emissions, temperatures are rising, snow packs are shrinking, storms and forest fires are becoming more severe, water for agriculture is becoming more scarce, while the risk of coastal flooding increases. Annual emissions of carbon dioxide have increased by almost 80% between 1970 and 2004, and experts predict a faster rate of global warming in the next 100 years than experienced in the last 10,000 years. At the same time, Oregon's population will continue to grow, increasing demands for efficient transportation and reliable energy.

Solution: Governor Kulongoski proposes a comprehensive legislative package that aggressively mitigates the impacts of global warming and puts Oregon on track to achieve our goal of reducing greenhouse gas levels to 10% less than 1990 levels by the year 2020. This package will make key investments in greenhouse gas reduction, energy efficiency and conservation, renewable energy, and sustainable transportation.

Greenhouse Gas Reduction: The Governor will introduce legislation to advance Oregon's reduction of greenhouse gas emissions, including a bill authorizing the design of a regional cap and trade market system to cap carbon emissions from the state's largest sources, establishing greenhouse gas performance standards for all new electricity generation sources and strengthening state tools to regulate the emissions of greenhouse gases.

Energy Efficiency: The Governor will build on Oregon's strong energy efficiency and conservation programs including a program for net zero emission buildings in the commercial and residential sectors, energy performance certificates for new buildings, broad-based energy efficiency financing tools for families and businesses, and new funding for energy efficiency for low income families.

Renewable Energy: The Governor will advance Oregon's position as a national leader in renewable energy manufacturing and energy production by focusing on expanding solar energy projects, further progress on meeting the goal of 100% renewable energy for state government, and strengthening the Business Energy Tax Credit to increase investment in renewable energy projects statewide.

Sustainable Transportation: In collaboration with his transportation initiative, the Governor will focus on encouraging low carbon fuels, establishing vehicle mile reduction goals and strategies to achieve those goals, and coordinating with utilities, automakers and developers to commercialize new technologies like plug-in electric vehicles.

For more information:

http://governor.oregon.gov/Gov/pdf/climate_change_agenda_1008_final.pdf

ENERGY TRUST + NW TRADE ALLY NETWORK LIGHTING ROAD SHOW

Mark your calendars today for the 2009 Energy Trust and NW Trade Ally Network, commercial and industrial lighting road show. Breakfast, program update and training will be provided for each session.

January 20 - Portland - Technology update training
January 21 - Coos Bay - Hands on lighting controls training
January 22 - Medford - Hands on lighting controls training
January 23 - Bend - Hands on lighting controls training

All sessions begin with breakfast at 7:30 a.m. and will conclude by 10:30 a.m. Information on locations and registration materials will be available in December.

For more information, visit Energy Trust's Business Energy Solutions — Existing Buildings program pages or call 1-877-510-6800.



Oregon Association of
Professional Energy Managers

P.O. Box 6764
Portland, OR 97228-6764



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.