

Free Educational Seminar

For PGE Commercial and Industrial Customers

HVAC, Building Tune-Ups & Commissioning

This free half-day seminar focuses on how to optimize your building's performance. You'll learn concepts to reduce energy use, improve building operation, enhance occupant comfort, and maximize the effectiveness of maintenance practices. You'll also learn when it might be time to call in the experts and hire a commissioning agent.

This workshop will equip participants to better:

- *Understand basic principles of building systems*
- *Increase performance and enhance system reliability*
- *Identify system savings opportunities*
- *Spot opportunities for capital investment in energy efficiency projects*

Who should attend?

Decision-makers who oversee operations and would like to expand their understanding of building systems and the energy efficiency opportunities to lower operating costs:

- *Building managers*
- *Facility managers*
- *Sustainability coordinators*
- *Building operators*
- *Energy managers*
- *Building owners*

Instructors

Bruce Dobbs, P.E., Mechanical Systems Engineering

Bruce has over 25 years of experience in mechanical design and energy services. Bruce was formerly a partner at DuPont Dobbs Engineers and Manager of Energy Services for Bentley Engineering. He has been on the faculty at Portland State University Department of Mechanical Engineering since 1996. Mr. Dobbs has a BS degree in Mechanical Engineering from Washington State University and an MBA from Pepperdine University. He is a member of the U.S. Green Building Council (USGBC) Higher Education Board.

Greg Nelson, P.E., Commercial/Industrial Energy Specialist, Portland General Electric

Greg is a mechanical engineer with 14 years of experience in commercial and industrial systems design and operation. Greg specializes in identifying energy efficiency improvement opportunities with businesses.

Time and Location

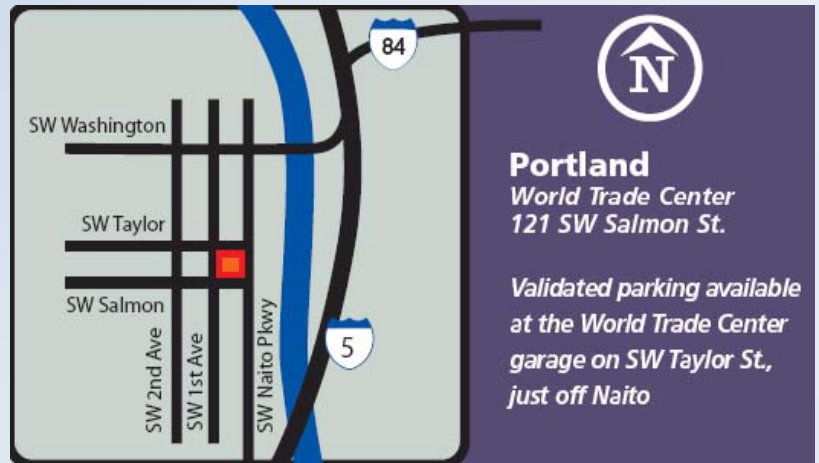
Thurs., Nov. 5, 2009

7:30 a.m.-12:00 p.m.

2 World Trade Center

Continental Breakfast: 7:30 a.m.

Seminar: 7:50 a.m.



Cost

Free to PGE customers. Others are welcome based on availability of space, small fee may apply.

Accreditation

- **Clackamas Community College:** 0.4 CEU's (continuing education units)
- Certificate of Completion that can be used towards the BOMA Certification

Registration

RSVP is requested as soon as possible. However, we can accommodate a few walk-in registrations. To register, e-mail PGE.Seminars@pgn.com or call **503-464-8020** and press "1" for classes.

More Educational Opportunities

For more information on additional classes for PGE business customers, visit our Web site at PortlandGeneral.com/Classes. Classes may be added throughout the year. If you'd like to receive e-mail notices of new class offerings, e-mail PGE.Seminars@pgn.com.

Additional classes to look forward to in 2009/2010:

- Basics of Electricity & Managing Energy Costs
- Compressed Air Systems
- EE & Renewables-A CFO Perspective
- Energy & Water-Double Your Savings
- Industrial Fan Systems
- Lighting Retrofits
- New Trends in Lighting



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