



The typical building seeking LEED rating for sustainability is not an industrial building at an electrical Utility. But when Tacoma Power decided to replace its aging complex of welding, carpentry and other workshops with a new facility, it chose to go green. The new 55,000 square foot building features energy efficiency and environmental sensi-

bilities that make for a bright, comfortable workplace. The Shops building would be around for many years, and it made good sense to incorporate efficient and environmental features that would benefit workers for generations.

Working with Chris Meek from the Integrated Design Lab on the daylighting design and Michael Lane of the LDL on the electric lighting, the goal was to aim toward LEED design standards for the new building. The result is a bright, airy space that uses 40 percent less energy than similar buildings. The electric lighting is "layered", offering task lighting for areas where more detailed work is performed. The skylighting provides a contribution of ambient lighting, even on overcast days.

The shops have 20 foot high ceilings with skylights that bring daylight into the workspaces year round. Skylighting is one of the most effective ways of daylighting. The electric lighting is high-efficiency fluorescent that are controlled by both occupancy sensors and daylighting controls.

"The installed lighting system is 45% below the energy code requirements at 0.85 watts/square foot. The energy efficient design still provides well over 60 footcandles of light," said Ken Kurtz, Tacoma Power's lead commercial lighting expert.

The daylighting controls are straightforward step-switching. By switching off lamps in response to daylighting contributions, energy savings can be garnered without needing to pay the added costs of dimming ballasts. As is usually the case, commissioning of the controls is a critical item in the success of the daylighting system.

Other sustainable features of the building include materials with recycled content, recycling the construction waste from the old building, efficient heating and water heating and ozone friendly refrigerants for the cooling system.

2006 Open House

The 17th Annual LDL Open House will be on December 6th. There will be a keynote speaker, a trade show, and a networking lunch. Look for our postcard invitation in your mailbox with all the details.



**tacoma
shops
go green.**

Above: Peter Meyer (center) of Tacoma Power tours the new carpentry shops area with Joel Loveland (l) and Chris Meek (r) of the Integrated Design Lab.

News

fall 2006 events.

Registration on Page 3

did you know?

Members of professional design organizations (AIA, NCQLP/LC, ALA, BOC, and others) may be able to receive continuing education credits for attending events offered by the LDL.

To self-certify your credits (sometimes called learning units) make sure you keep the Certificate of Completion that we distribute at each event.

Learning unit credits are almost always issued at a rate equal to the contact hours. So a 3 hour class would be worth 3 credits.

For information about how your organization works with continuing education credits visit their website at:

AIA
aia.org

ALA
americanlightingassoc.com

ASID
asid.org

BOC
neec.net/boc.htm

BOMA
boma.org

IFMA
ifma.org

IIDA
iida.com

NCQLP
ncqlp.org



BETTERBRICKS

All Registration **must be in advance**. All fees must be **paid in advance**. No registrations or fees will be accepted at the door. On-line registration is available at <http://www.lightingdesignlab.com/classes>

1 • Webinar: Energy Bill Update (by BOMA). \$20.



Seattle: Tuesday, 9/26 • 11:30 am - 1:30 pm

The federal government has issued the final set of guidelines for claiming the full \$1.80 psf deduction for specified energy efficiency improvements as part of the 2005 Energy Bill. This audio seminar will help industry professionals understand what capital expenditures qualify and who to claim the tax deductions for them. The Energy Bill offers a targeted, temporary tax deduction for energy efficient building construction and renovation, and the deduction is "performance based" in so far as the property must meet certain ambitious energy efficiency standards in order for the relevant expenditures to be deductible in the year in which they are made. This audio seminar will outline the implications of this bill for commercial real estate owners and operator. Learn what types of buildings, projects, and upgrades are covered by the legislation and how to apply for appropriate tax deductions.

2. Efficient Nighttime Lighting. \$20.



Bozeman:	Tuesday, October 17	11:30 am - 1:30pm (live)
Billings:	Tuesday, October 17	11:30 am - 1:30pm (telecast)
Missoula:	Tuesday, October 17	11:30 am - 1:30pm (telecast)
Helena:	Tuesday, October 17	11:30 am - 1:30pm (telecast)
Butte:	Tuesday, October 17	11:30 am - 1:30pm (telecast)
Great Falls:	Tuesday, October 17	11:30 am - 1:30pm (telecast)
Kalispell:	Tuesday, October 17	11:30 am - 1:30pm (telecast)

Exterior lighting not only provides for safety and security of persons and property, quality exterior lighting also creates a dynamic nighttime environment while minimizing both light trespass and light pollution. What does it take to light parking, walkways, entrances, canopies, outdoor sales & facades aesthetically and functionally? What can you do to minimize light pollution and light trespass to be a good neighbor? How does LEED™, ASHRAE 90.1, the IESNA/IDA joint Model Lighting Ordinance address exterior lighting? This class will provide you with an understanding of issues and concepts for quality nighttime lighting. (2 CEU contact hours)

3 • Lighting for Health Care Facilities. \$20.



Boise:	Tuesday, October 3	2:30 pm - 4:30 pm
Billings:	Wednesday, October 18	11:30 pm - 1:30 pm
Spokane:	Tuesday, October 31	11:30 am - 1:30 pm
Seattle:	Tuesday, November 7	2:30 pm - 4:30 pm
Portland:	Wednesday, November 8	2:30 pm - 4:30 pm

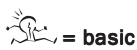
Lighting plays a vitally important role in health care facilities. From maximizing energy efficiency to making patients and visitors feel good and heal faster. This class will explore the options for creating a quality lighted environments in new and existing health care facilities. Concepts from IESNA RP-29-06 "Lighting for Hospitals and Health Care Facilities" and from the GGHC "Green Guide for Health Care" will be used. Attendees will learn how their designs effect energy consumption, light levels and lighting quality. (2 CEU contact hours)

4 • LED Product Demonstration Mock-up with IESNA. \$40



Seattle: Wednesday, November 1 11:45 am - 2:45 pm

A joint presentation of the LDL and the Puget Sound Section of the IESNA. Our guest speaker will present on the latest developments in solid state lighting. Our mock-up room will have actual LED luminaires installed for your review. Manufacturer's representatives will answer questions about the products on display. Keynote Speaker: Ian Ashdown, Fellow IESNA, is senior research scientist for TIR Systems Ltd., Burnaby, BC. He has 30 years' experience in lighting design, research and development, and software engineering. He is the author of numerous academic papers, magazine articles and book chapters on the technical aspects of illumination engineering and lighting design. (3 CEU contact hours)



= basic



= intermediate



= expert

registration form.

Fall 2006 Classes

PAYMENT POLICY: Fees Must Be Paid In Advance before attending class. Purchase Orders, checks, and credit cards are accepted. Complete and fax this form to 206-329-9532. Class fees are waived for university students and employees of sponsoring electric Utilities. **No Payment or Registration Will Be Accepted At The Door.**

Secure On-line registration is available at <http://www.lightingdesignlab.com/classes>

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Please check the circles of the class(es) you wish to attend (on-line registration available at www.lightingdesignlab.com). event locations on website.

1 • BOMA Webinar: Energy Bill Update. \$20

Seattle: Tues 9/26 • 11:30 am - 1:30pm

2 • Efficient Nighttime Lighting \$20

Bozeman: Tues 10/17 • 11:30 am - 1:30pm

Billings: Tues 10/17 • 11:30 am - 1:30pm

Missoula: Tues 10/17 • 11:30 am - 1:30pm

Helena: Tues 10/17 • 11:30 am - 1:30pm

Butte: Tues 10/17 • 11:30 am - 1:30pm

Great Falls: Tues 10/17 • 11:30 am - 1:30pm

Kalispell: Tues 10/17 • 11:30 am - 1:30pm

3 • Healthcare Lighting. \$20.

Boise • Tues 10/3 • 2:30 - 4:30

Billings • Wed 10/18 • 11:30 - 1:30

Spokane • Tues 10/31 • 11:30 - 1:30

Seattle • Tues 11/7 • 2:30 - 4:30

Portland • Wed 11/8 • 2:30 - 4:30

4 • LDL/IESNA LED Mockup. \$40

Seattle • Wed 11/1 • 11:45 - 2:45

You can register instantly and securely on-line. Payment is accepted by credit card, check and purchase order.
www.lightingdesignlab.com/classes



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