

LIGHTING RETROFITS WITH DEEP SAVINGS AND IMPROVED QUALITY

April 06, 2017

7:30 am until 4:30 pm

Best Western Plus Grant Creek Inn
5280 Grant Creek Road
Missoula, MT 59808
Registration Fee: \$139

0.7 Continuing Education Units through Washington State University may be made available for this training

Key Learning Objectives

- Select LED products with the best value for each application
- Determine where controls are still cost effective with LED being so low wattage
- Identify diminishing returns & how to combat them
- Discover why Human Centric Lighting makes lighting much more than just a commodity
- Learn financial tools, better than payback & ROI

Projects/Applications

- Office buildings, commercial stores, hospitals, prison, military
- K-12 schools, colleges, trade schools, etc.
- Industrial plants, warehouses, greenhouses, cold storage, agricultural processing

Who Should Attend

- Maintenance and operational staff
- Facility supervisors, engineers & contractors
- Managers, executives, owners & energy experts
- Consultants, energy efficiency experts, utility staff

Agenda

7:30 Registration (breakfast provided)

8:00 Morning Session

- Introduction
- Financial tools
- Diminishing returns & how to combat them
- General LED information

9:45 Break

10:00 Morning Session Continued

- Interior applications

11:30 Lunch (provided)

12:00 Afternoon Session

- Interior applications, including hibays
- Basic and advanced controls, including Internet of Things and connectivity
- Exterior applications

2:00 Break

2:15 Afternoon Session Continued

- Exterior applications
- Exterior controls
- Projects
- Final Q&A

4:15 Summary and Evaluation

4:30 Adjourn

Course Description: Often the most important application is how to retrofit linear fluorescent fixtures. Highest lumen T8s, extra-long life T8s, TLEDs (LED T8s), LED lightbars, LED troffer kits and new LED fixtures will be compared. LED hibays are finally available, which are cost effective replacements for not just HID, but also T8 and T5HO. Many other interior and exterior applications will be discussed. Payback and ROI are not sufficient financial tools. Unless there are still low hanging fruit (such as T12s with magnetic ballasts) retrofits will result in diminishing returns. While saving 60% wattage, the electric bill reduction will be a fraction of previous retrofits. Rebate and reduced maintenance are often not sufficient. Find out why retrofits are still worth pursuing due to soft savings, certifications and connected lighting. Also, learn why Human Centric Lighting is the next big step in lighting, and may become more important than Edison creating the light bulb.

Instructor: Stan Walerczyk is principal of Lighting Wizards. His 28 years of lighting experience includes distribution, maintenance, retrofit contracting, third party review, consulting, design, luminaire design, rebate planning, policy making and research. He wrote 100 white papers and magazine articles, including 9 on high bays, and presented 1,100 seminars on various aspects of lighting. He is a Certified Lighting Energy Professional by the Association of Energy Engineers and is on the Review Board. He is an officer of the Human Centric Lighting Committee and wrote the book, *Lighting and Controls: Transitioning to the Future*, published by Association of Energy Engineers.

Hosting Sponsor



Co-Sponsoring Organizations



This training is provided by Stan Walerczyk. For more information: stan@lightingwizards.com

The Northwest Regional Industrial Training project is coordinated and funded by the Northwest Energy Efficiency Alliance (NEEA), a private non-profit organization funded by Northwest utilities, Energy Trust of Oregon and Bonneville Power Administration. NEEA and its stakeholders subsidize up to 85% of the cost to attendees, which means the cost listed on the front of this brochure is significantly less than the average price in the marketplace. NEEA works in collaboration with its stakeholders and strategic market partners to accelerate the sustained market adoption of energy-efficient products, technologies, and practices. NEEA's market transformation efforts address energy efficiency in homes, businesses, and industry.

How to Register

Registration deadline is **March 23, 2017**

Register online:

<https://www.regonline.com/185neea-industrialtraining>

Or fax, email, or mail the below registration form to:

Phone: 888-720-6823

Fax: 503-525-4800

Email: industrial-training@industrial.neea.org

NEEA Industrial Training c/o Ecova
100 SW Market St, Suite 200
Portland, OR 97201

Please make checks payable to NEEA Industrial Training c/o Ecova#2300

Questions

Visit <http://neea.org/get-involved/calendar> or contact the training center at 888.720.6823 or industrial-training@industrial.neea.org

Registration Form – Please register me for the **Lighting Retrofit with Deep Savings** training on **April 6:**

First Name _____ Last Name _____ Title _____

Phone/Fax _____

Company Name _____ Utility Provider _____

E-mail Address _____

Address _____

Please indicate special diet needs:

☐ Vegetarian

☐ Other _____

City _____ State _____ Zip _____

Participation approved by: _____
Supervisor name

Supervisor e-mail _____

Payment Options

Please enclose a check with this registration form and mail to the above address.

Discount Code: _____

Purchase Order: _____

Cancellation Policy: Full refund of registration fee if attendance is cancelled by **March 23**; half refund thereafter.