lighting design lab
2915 4th Ave. S
Seattle, WA 98134
www.lightingdesignlab.com

THANK YOU TO OUR PARTNERS IN CONSERVATION

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Extension Energy Program

New Face in Marketing & Communications

I'm pleased to announce the newest member of the Lighting Design Lab. Elizabeth Lyon joined us this past July as our marketing strategist.

With over 20 years of marketing, branding and program management experience, Elizabeth will build the Lab's marketing-communications plan, and work closely with the team and our supporting partners to further enhance the Lab's visibility in the region, and to help grow the educational and training classes we offer.

Elizabeth brings a unique combination of mission focused work with strategic energy efficient product marketing, and product and service promotion among commercial building customers.

Working with her registered therapy dog Rex, Elizabeth also volunteers at the Veterans Affairs Medical Center in Seattle.

Join me in welcoming Elizabeth to the Lab.

Kurt Nielsen,
Manager

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lighting design lab

The Lighting Design Lab is a Northwest utility funded lighting education facility promoting commercial and industrial energy conservation.

NEWSLETTER | FALL 2013

New Leadership Selected for the Lighting Design Lab

In May of this year, Kurt Nielsen, LC, CLEP was named manager of the Lighting Design Lab. In this leadership role, Kurt will develop and execute a strategic business and marketing plan for the Lab, including engaging utility partners and stakeholders in increasing the Lab's visibility, and furthering our mission of integrating energy conservation education with effective and aesthetic lighting design.

Combining his technical and management experience, Kurt brings over 20 years of business and lighting expertise to the table. Most recently he held dual-positions at two sister companies: GM for Evergreen Lamp, and Director of Product & Vendor Management at Light Doctor, a regional solutions provider serving commercial, industrial, multi-family, and institutional organizations throughout the Pacific Northwest.

Kurt's previous work developing employee technical training and product education programs will be an asset in helping the Lab expand its current services.

As an active participant in the industry, Kurt serves on the Illuminating Engineering Society (IES) Energy Management Sub-committee, and is a member of the Association of Energy Engineers. In recent years, he participated in the LED Technical Advisory Group (LED TAG) for Washington State University and Bonneville Power Administration.

Kurt holds a bachelor's degree from the University of Washington and earned his MBA from the Kelley School of Business at Indiana University.

With his wife and three sons, Kurt resides in the Magnolia neighborhood of Seattle.

Please join us in welcoming Kurt to the Lab.

"Our opportunities to expand seem endless. With the rapid pace of new technology and product development, the Lab is uniquely positioned to provide the needed educational and technical resources the industry needs."

We would like to thank Andrew Pultorak for his excellent work as interim manager for the past two years. He executed a number of key initiatives, continued to foster the Lab's brand, and maintained strong relationships with our regional partners. Andrew will continue to serve our customers around the region in his role as a lighting specialist.

In this issue...

NEW Lighting Guides!

Four new Lighting Guides are now available: Small Retail T8 Fluorescent Lensed Recessed; Small Retail LED Lensed Recessed; Small Parking Lot LED Replacement; Open Warehouse Daylight Controls Open Loop.

Lighting Industry Innovations and Trends for 2013

Instructor: Andrew Pultorak, LC, MIES

Morning Class: 10:00 a.m. - Noon

This class will review trends and the latest innovations in commercial and industrial lighting. We will also profile award winning products recognized by the industry for their advancements in energy efficiency.

This course is intended for those familiar with basic lighting terminology, e.g., CRI, CCT, L/W, LED, OLED, but also appropriate for those just entering the field.

Andrew Pultorak has been active in the lighting industry for 26 years. Throughout his career, Andrew has designed interior and exterior lighting in both national and international settings. He has developed and taught classes on energy efficiency, lighting design principles, lighting energy codes, and federal legislation impacts on lighting. Andrew holds a certification from NCQLP (National Certification of Qualified Lighting Professionals), is a member and past president of the IES (Illuminating Engineering Society) Seattle Section Board of Managers, and is an active member of the IES National Progress Committee.

Lunch: Noon - 1:00 p.m. (included in registration)

Exterior Lighting - A New Look

Instructor: Eric Strandberg, LC

Afternoon 1:00 p.m. - 3:00 p.m.

One of the bright spots with the LED revolution is exterior lighting. This intermediate level class will look at the overall landscape of exterior lighting by reviewing the new Illuminating Engineering Society (IES) recommendations and luminaire design opportunities. Included will be an examination of walkways, parking lots and building entries demonstrating how LED lighting can be applied primarily in existing and retrofit installations.

Eric has over 25 years of lighting industry experience. He joined the Lab in 1995 to promote energy efficiency and quality lighting design. Eric's work includes new technology evaluation, developing and teaching industry courses, writing articles, and conducting project consultations on almost every aspect of lighting design and conservation.

Class Locations and Dates

Bellevue, WA	Thurs., Oct. 3rd	Residence Inn-Marriott: 605 114th Ave SE, Bellevue, WA 98004
Boise, ID	Wed., Oct. 9th	Idaho AGC Training Ctr: 1649 West Shoreline Drive, Boise, ID 83702
Tacoma, WA	Tues., Oct. 15th	Courtyard Marriott Downtown: 1515 Commerce St, Tacoma WA 98402
Portland, OR	Thurs., Oct. 31st	Marriott-Downtown Waterfront: 1401 SW Naito Parkway, Portland, OR 97201
Everett, WA	Thurs., Nov. 7th	Snohomish Co. PUD: 2320 California St, Everett, WA 98201
Seattle, WA	Wed., Nov. 20th	Lighting Design Lab: 2915 4th Ave. S, Seattle, WA 98134

Fees

Through the generosity of our partners in conservation, we are able to keep course fees to a minimum.

Standard Registration	$30 per class (lunch included)
Employees of Sponsor Organizations	$10 per class (lunch included)
Students (with valid university/college ID)	$10 per class (lunch included)

Registration and payment are required in advance. Register online at www.lightingdesignlab.com.
For assistance, contact Elizabeth Lyon at Beth@lightingdesignlab.com

E^3 = Efficiency, Efficacy, and Effectiveness

How LEDs bring it all together.

by Eric Strandberg, LC

When we think of efficiency, we think of wattage saved. When we think of efficacy, we think of lumens per watt. This adds functionality to the simple efficiency model. However, when we think of effectiveness, we must think of performance; is the lighting performing the way we expect? So, if effective lighting is really the goal, how can this be accomplished most efficiently? LEDs are new light sources that can help us achieve demanding efficiency goals, and in many cases improve the effectiveness over current technology.

In an effort to save power lighting has often sacrificed effectiveness for efficiency. We have gone from inefficient light sources to much lower power light sources that, in some cases, compromised the delivery of light. A few examples of this would be converting inefficient incandescent PAR lamps in recessed cans or tracks to lower wattage, higher efficacy CFL lamps. This seems like a good strategy, but optically the PAR lamp can deliver light much more effectively out of the fixture and to the visual tasks than the CFL. Another example would be exterior area lighting. We have actually seen inefficient incandescent street lights in the field [Image 1]. The HPS and MH lights that replaced them decades ago were more efficient, and optically more robust in delivering the quantities of light desired in these challenging exterior applications [Image 2], but there were always compromises between the quality of light, maintenance cycles, and less than perfect optics.

For exterior applications, LEDs bring advantages into a single light source that historically were spread over different lamp types, so one had to choose which features were more important.

Performance Comparison

	HPS	Metal Halide	Induction	Incandescent	LED
Long Life	Yes	-	Yes	-	Yes
Good Optics	-	Yes	-	Yes	Yes
High CCT* Option	-	Yes	Yes	-	Yes
High CRI*	-	Yes	Yes	Yes	Yes
High L/W*	Yes	Yes	Yes	-	Yes
Good Lumen Maintenance	Yes	-	-	Yes	Yes
First Cost	$$	$$	$$	$	$$$

***CCT= Correlated Color Temperature**
***CRI = Color Rendering Index**
***L/W = Lumen per Watt**

No one light source could have fit in all of the categories…until the current generation of LEDs.

LEDs bring all of these qualities into a single light source. As costs continue to decline, and reliability holds, it is hard to imagine an application where LED technology won't be the most effective solution [Image 3].

If E^3 is the goal, LEDs look like the way forward.

Image 1 / Obsolete Incandescent

Image 2 / Current Technology HPS

Image 3 / Modern LED