December | 2013

MI SSL Industry is LEDing the Way

The solid-state lighting industry gathers to learn and share.

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By: Brindley Byrd

On Tuesday, December 3rd, manufacturers, contractors, distributors, utility programs, financing programs, Kryo (pictured below) and others gathered at the Michigan Advanced Lighting Conference held at the Electrical Industry Training Center in Warren, MI.

NextEnergy was the lead organizer of this event held in conjunction with the Michigan Solid State Lighting Association (MSSLA) Symposium. The Green Team Coalition also supported the conference, as did the Michigan Public Service Commission. Main sponsors included DTE Energy, Consumers Energy, the National Electrical Contractors Association and Efficiency United.

A day of breakout sessions where bracketed by two keynote speakers, Dr. John Curran to start the day and Eric Haugard to leave attendees with a vision for the future.

Dr. Curran works in the US Dept. of Energy Solid-State Lighting (SSL) program and grounded his talk with the history of solid-state lighting coming from the semi-conductor industry. This insight explains the exponential performance curve forecasted for light emitting diode (LED) technology. This performance growth is captured in Haitz's Law which states that every 10-years, LED perform 20% better and are 10% less expensive. The key measure for LED performance is lumens per watt. The goal is to get to 240 lm/W.

He also provided information on the saturation rate of LED technology in the market place. The sector where the most installed LED systems can be found is exterior lighting installations. This was no real surprise. The data shared by Dr. Curran indicated that LED's currently have just under a 2% market share. This was a bit surprising.

The data he shared as to the market saturation of LED's in all lighting installations left the crowd stunned. Currently, of all luminares installed in the United States **less than 1/10th of 1-percent are LED systems**. An LED system includes four main components: a controller, a driver, LED's and some sort of lens.

The potential of LED installations is a tremendous opportunity for energy efficiency contractors.

Following Dr. Curran's talk, attendees then had their choice of two tracts to follow; one focused on customers & contractors and the other for SSL manufacturers. Should attendees not desire this type of knowledge exchange they had ample opportunity to directly engage with the 15 exhibitor booths also part of the conference. This provided an excellent opportunity for contractors to get one on one with Michigan SSL manufacturers and learn how to provide better lighting solutions for their customers.

The big takeaway for this attendee is one thing that what will differentiate successful energy efficiency contractors from those who are mediocre -- their embrace of building controls. All subsequent speakers in the contractor tract spoke of the importance controls have not just for lighting, but also for overall building energy performance.

The day closed out with Eric Haugaard, Director of Product Technology for Cree Lighting. Mr. Haugaard presented great information on the current state of the SSL industry and a vision for building controls. He should be applauded for not overly 'selling' his company's wares during his 30-minute presentation.

The vision he illuminated specific to controls directly involved the use of SSL technology. Sensors are critical for a building control or management system (BMS) to work and comply with ASHRAE 90.1 – 2013, let alone operate optimally. Sensor technology is advancing past hard-wired infrared systems, ultrasonic and even

occupancy temperature sensors. Sure, we all have heard about wireless sensor technology and how easy it is becoming to install an otherwise innocuous button on the ceiling near a window wall to trigger dimming of interior lighting to harvest daylight. With all of these systems there are not just concerns of how the sensors connect/control the building's system, but the fact that there is a separate sensor.

The question Mr. Haugaard askes was, "Why not use SSL systems as the light source AND the sensor?" He showed a demonstration to the audience of a SSL sensor that created electronic signals as the test subject touched the SSL device lens or waved his fingers above the lens. Visioning SSL systems as a two-way device opens up the possibility that sources of light could be BMS sensors.

Only the future will tell if this technology will be adopted. In the meantime, the team that assembled and hosted the 2014 Michigan Advanced Lighting Conference is owed a debt of gratitude for gathering Michigan's solid-state lighting industry for a day of learning and sharing.

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MEECA is a non-profit trade association created to support our core members: companies that design, install and evaluate energy savings solutions in Michigan's residential, commercial and industrial buildings.

MEECA advocates that Michigan have the most robust, reliable, qualified and predictable energy efficiency industry in the nation.

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