

## **BOMA of Oregon Newsletter – November 2013**

### **Illuminating Ideas for Energy-Efficiency in Parking Garages**

*1000 Broadway Building Lights the Way*

The 1000 Broadway Building in downtown Portland is on the forefront of employing energy-efficient upgrades in the 20-year-old structure to help meet budget goals. The office building property manager must manage budgets with a balance of keeping operating expenses in check without sacrificing the comfort, safety and security of the building's tenants and visitors.

In looking for ways to incorporate energy efficiency into the building, 1000 Broadway the property manager and facilities engineers frequently turn to Energy Trust of Oregon, which provides technical services and cash incentives to businesses who invest in energy efficiency. Diane McMahon, property & asset manager, 1000 Broadway, along with Kevin Brooks, chief engineer, 1000 Broadway, had a plan to upgrade the lighting in the building's busy six-story parking garage where the lights are on 24 hours a day, 7 days a week. The 80,000-square-foot garage serves both the office building's weekday monthly parkers and the hourly-rate evening traffic for the nearby performing arts venues and downtown activities.

#### **LED Lighting Plus Control Technology**

They planned to replace the 150-watt High Pressure Sodium (HPS) lamps in the parking garage and add lighting control technology to eliminate waste when areas of the garage are not being accessed. Motion sensor technology is innovative for parking garages where cars and people require enough light to navigate the twists and turns of the parking structure with a sense of safety and comfort. Initially, they had intended to use 4-foot T5 fluorescent lamps to replace the HPS lamps but soon discovered that 65-watt Light-emitting Diodes (LEDs) would provide superior cost savings and lighting quality.

Maintaining a sense of safety for both drivers and pedestrians getting to and from their cars was a key element in the lighting control design. The wireless control system creates a path of lights as cars drive or pedestrians walk through the garage. The sensors and relays "talk" to the multiple fixtures, activating an optimum number of lights ahead so that there is never a feeling of walking or driving through a dark or dimly-lit garage.

Cost and maintenance also drove the decision to upgrade parking garage lighting. The LEDs can last up to 15 years. 1000 Broadway facilities staff was replacing each of the HPS lamps at least twice a year.

Along with increased energy efficiency and lower maintenance, the LED lamps have higher lighting levels. "The color of the light is different – but better," said McMahon. "It's a white, bright LED illumination instead of a yellowy light that we had before." Brooks agrees and adds, "The new lamps are also more directional, leading to more direct light and less waste."

Energy Trust provided the 1000 Broadway Building with cash incentives of \$36,507 for the lighting improvements in its parking garage, which are estimated to save 214,961 kilowatt hours of electricity annually. The parking garage project realized an additional 34,162 kilowatt hours of savings by adding the lighting control technology. The new lighting system is anticipated to save to \$13,488 on utility bills annually.

To learn more about Energy Trust incentives for Oregon businesses, contact Energy Trust Existing Buildings at 1.866.605.1676 or [existingbuildings@energytrust.org](mailto:existingbuildings@energytrust.org), or visit our website at [www.energytrust.org/commercial](http://www.energytrust.org/commercial).