

Corporate Campus - Upgrade

# Tri-State Generation and Transmission Association Westminster, co

- Reduces energy consumption by two-thirds
- · Nearly maintenance-free
- Significant improvement in brightness and illumination





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The new LED lighting is a huge improvement over the standard technology in terms of brightness and illuminating the space.

Mike McCoy, Senior Engineer and Energy Specialist, Tri-State Generation and Transmission Association

### EXTREME MAKEOVER BRINGS BIG SAVINGS

#### **OPPORTUNITY**

Tri-State Generation and Transmission Association, a regional electric power supplier, put its long-standing commitment to energy efficiency into action when it installed Cree LED lighting technology in the east parking lot of its headquarters in the north Denver suburb of Westminster, Colorado.

#### **SOLUTION**

The parking lot's extreme makeover consisted of replacing all 34 of the existing 400-watt metal halide lights (field measured at 455 watts) with 217-watt Cree Edge™ Series luminaires. The new lighting system reduces the energy load by two-thirds. The expected lumen depreciation rate of the luminaires is approximately one percent per year based on correlated IESNA LM-80 data. Compare that to a metal halide system that may potentially depreciate at greater than 10 percent per year.

According to Tri-State senior engineer and energy specialist Mike McCoy, a large portion of the payback calculation is based on the longevity of the new lights. "The fixtures have a lifespan reaching far beyond the anticipated application life," he explained, "with cost savings stemming not only from less equipment purchased, but also from the elimination required to service lamps and ballasts." McCoy used the existing light poles, reducing the cost for the replacement system.

#### **BENEFITS**

As a regional electric power supplier, Tri-State is interested in energy and maintenance savings and being on the leading edge of outdoor lighting. The Cree luminaire installations are serving as demonstrations for the company's member electric co-ops, other utilities and business owners who may be interested in instituting similar technology at their facilities.

"Simply put, we see this project as an example of what one company is doing to increase efficiency, protect the environment and save money during these tough economic times," McCoy said. Tri-State is recognized as the first company in the Rocky Mountain region to institute LED lighting technology on this scale.

The success is dramatic when comparing before and after nighttime photos of the parking lot. "It's like night and day—almost literally," McCoy said. "The new LED lighting is a huge improvement over the standard technology in terms of brightness and illuminating the space."

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