

KANE Lighting Upgrades Drive Down Costs and Energy Use

“Projects like this that promote safety and reduce our energy use and carbon footprint are no brainers.”

– **Mike Gardner**
KANE President and CEO



Situation

KANE recognizes the economic, social, and global benefits of sustainability. The company maintains comprehensive conservation programs throughout its on-road and warehouse operations. Programs include recycling and re-use across all nationwide warehouse locations, active consolidation of customer shipments to reduce truck miles, and deployment of CNG-powered trucks.

KANE initiated a lighting improvement and energy efficiency program in 2007, replacing metal halide lamps with highly efficient fluorescent lighting technology. But fluorescent lighting has a limited useful life in both lamp and ballast technologies. At the end of 2014, the lamps had reached their rated life and the ballasts were approaching theirs. With safer, more energy-efficient LED, high-bay lighting products available, the KANE leadership team began evaluating alternatives.

Strategy

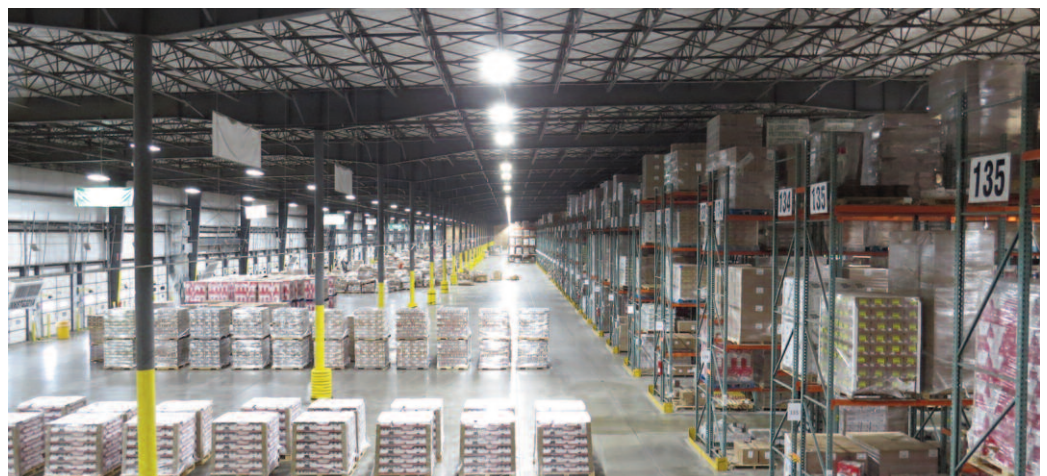
R World Energy Solutions in King of Prussia, PA was selected as the general contractor and project manager to install new lighting in two of KANE’s Scranton, PA distribution

centers, covering 1.2 million square feet of space. High-efficiency high bay LED replacement fixtures were installed in the warehouses. LED retrofit lamps were installed in the existing fixtures in the offices and parking areas.

The change addressed the following business objectives:

- **Reduce energy use** – KANE is committed to minimizing its carbon footprint.
- **Eliminate safety concerns** – Darkened areas were emerging.
- **Improve working conditions** – Workers had difficulty reading labels.
- **Improve the customer experience** – Well-lit facilities are more attractive.
- **Reduce maintenance costs** – Longer-lasting LED lights reduce replacement frequency.

According to KANE President and CEO, Mike Gardner, “Projects like this that promote safety and reduce our energy use and carbon footprint are no brainers. Our partners at R World provided an efficient, turnkey solution.”



Results

The project is on path to achieve all of the expected improvements, illustrated in the chart below.

Project Metrics	Prior Configuration	New Configuration	Expected Improvement
Fixture count (Excludes office & parking spaces)	1,445	1,445	N/C
Area covered (SF) (2 sites)	1,200,000	1,200,000	N/C
Average lumen output (Lumens)	10,800	17,000	6,200
Average illumination (Foot Candles)	Approx. 0.05 to 10	Approx. 15 to 21	Approx. 10 to 12
Average rated life (hours)	13,000	50,000 to 100,000	37,000 to 87,000
Energy consumption (kWh/yr)*	3,088,462	1,065,706	2,022,756
Energy usage expense (\$/yr)	\$275,449	\$96,697	\$178,752
Maintenance expense (\$/Yr)	\$42,367	Eff. \$0 (first 20 yrs)	\$42,367
Total Operating Expense (\$/Yr)	\$317,816	\$96,697	\$221,120

*Kilowatt hours per year

Based on EPA estimates, the reduction of 2,022,756 kWh of fossil fuel power generation at the source has the impact equivalent of:

- 294 passenger vehicles taken off the road
- 500 tons of decomposing waste removed from landfills
- 156,500 less gallons of gasoline consumed

KANE is a third-party logistics provider that helps manufacturers and their retail partners warehouse and distribute goods throughout the U.S.