

## KVH Chicago Goes Green

According to [ENERGY STAR](#), a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy, conserving energy is the first step to going green. Working with BlueStar Energy Services, KVH Chicago took that first step in December as the facilities team made some smart energy choices that will have lasting benefits for KVH, its employees, and the environment.

At the heart of the effort was the overhaul of the overhead lighting in the KC facility by switching from T-12 bulbs (which will be discontinued in the next few years) and halogen lighting to the more energy efficient T-8 bulbs from GE. The new T-8 bulbs closely reproduce the properties of natural sunlight and provide energy savings. The result? KVH Chicago is lowering its energy needs and protecting the environment by reducing greenhouse emissions.



*Bob Cook, KC maintenance technician, shows off the two types of older bulbs (closest to him) and the new energy-saving T-8 bulb*

"When we negotiated with BlueStar, they made some great suggestions to help us save on energy costs as well as get a large tax incentive (approximately \$24,000)," said John McAlarney, KC's manufacturing engineering manager. "More than 1,000 bulbs along with the associated ballasts and reflectors were replaced by 3 of their technicians over a period of 10 days. The main production floor was done on the weekend, so there was very limited impact on production.

"The power use on the two lighting panels measured before and after the lighting change showed an average 40% reduction in power use. BlueStar Energy Services estimates that KVH's return on investment should be realized in approximately 2.5 years."

An additional, and equally important, benefit of the new T-8 bulbs is the potential for a corresponding boost in productivity. Studies show that quality lighting in a workplace helps workers produce more products with fewer mistakes and leads to a 10-50% increase in productivity. Good lighting can also decrease errors by as much as 30-60%.



**Before and After:** *In the new section of the KC plant, the old lighting (left image) cast harsh arcs of light along the walls while offering less illumination compared to the new lights (right)*

"The light readings show comparable or better foot candle levels in the areas tested," continues McAlarney. "In the military display inspection area, the new lighting is actually allowing team members to see more particles that are not being seen in the assembly area, which still has the clean air module T-12 lighting but will be changed in the near future. Of course, there is an adjustment period for the new lighting, but overall the feedback has been positive and we are looking forward to lower electric bills."