



# MY LED LIGHTING GUIDE

YOUR GUIDE TO ENERGY EFFICIENT LED LIGHTING

Guides for  
Facilities Managers



## Solving Three Lighting Problems for Power Generation Facilities

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Power Plant Generation Lighting is unique because of the problems associated with this environment. In facilities where steam is generated, heat is a byproduct and can't be avoided. We have years of experience working in these environments so here is our list of the top 3 problems and solutions.

Below are 3 solutions to common lighting problems that are unique to power generation utility plants.

## 1. Power plants can be hot environments

To generate power by steam generation, you need to create steam. This means you have a hot environment. Whether its coal, natural gas, other types of fossil fuels, or nuclear, typical LED products do not work well or last for a long time in a hot environment.

Before and after photo



The problem gets magnified in some environments where lights cannot be maintained while generation is in progress. When it comes time for scheduled down time, many of the HID lights just aren't working because they are well past their expected life span.

Let's take a look at a typical 2 year run cycle between maintenance. At 24 hours a day, 365 days a year, operational hours = 8,760. Over two years, that equates to 17,520 hours. Most HID bulbs, at best, are good for 15,000 hours of run time. If the bulbs are working, they would be almost at end of life, and not at all producing the light levels required to work in a dangerous work environment.

Most LED solutions are not built to handle extreme temperature conditions. Most have an upper ambient temperature limit of 130°F, not nearly enough for periods in summer when temperature at roof levels can exceed those ranges.

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We solved this heat problem with our engineered high temperature high bay and flood light. It is powerful enough to replace 400W and 1000W HID. Along with great lighting engineering, these fixtures are designed for ambient temperatures between -85°F and 190°F. They offer several mounting options and can be equipped with safety cables for an added layer of security.



These lights have been designed with heat (and cold) in mind. It is completely over built, under-driven and performs extremely well in conditions of heat and steam, and it is also IP66 rated. These lights are warranted for five years.

Power facilities sometimes have a need for lighting that can handle above 130°F. To satisfy this requirement we also have a solution that is powerful enough to replace 400W and 1000W HD and is good to 140°F: the 300W LED high bay is DLC Premium classified and has a five year warranty.

## 2. The cost of engineering studies alone can be a deterrent to upgrade to LED

Changing out light fixtures in a power generation utility plant is not a simple task. Some facilities require a complete set of engineering studies done on the new fixture before the lights can be purchased and installed. This is not a fast, or a cheap process. In fact, the cost of the engineering studies alone can more than double the cost of the fixture replacement project.



In this case, retrofitting your existing light fixtures over to LED allows you to keep your fixtures in place and convert over to LED. It is not always possible to use the existing fixtures. Some of the fixtures may

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have deteriorated beyond the point of reuse. However, if your fixtures are in good condition, then replacing the bulb and ballast with a LED solution is cheap, fast and easy to do, and does not compromise your existing engineering diagrams.



## Retrofitting HID

Replacing HID (Metal Halide, High Pressure Sodium or Merury Vapor) is a simple task involving these simple steps.

1. Turn off power.
2. Remove the bulb.
3. Remove the socket.
4. Remove the ballast.
5. If the fixture has a reflector, remove it also.
6. Install the LED driver where the ballast was, and reconnect it to the incoming power supply.
7. Configure the multi-function LED head mount so it is optimal for your fixture.
8. Slide the retrofit head on the mount.
9. Wire the LED Head to the LED Driver.

MyLEDLightingGuide offers 11 Retrofit Solutions that can replace anything between 70W HID to 1500W HID. All backed with a 10 year warranty. Voltage compatibility is from 100-277V and 277-480V [HV].

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## Retrofitting Fluorescent

Retrofitting fluorescent light is essentially the process of changing fluorescent tubes with LED tubes. The LED tubes are self-contained, both LED components and driver are contained within the tube. Unlike a fluorescent tube where the driver is external and mounted inside the fixture, LED tubes are all in one.

Replacing Fluorescent to LED is a simple task involving these simple steps.

1. Turn off power.
2. Remove the bulb.
3. Remove the ballast or disconnect the ballast.
4. Wire the input wires directly to the wires on one side of the tombstones. Un-shunted tombstones are required.
5. Install the LED Tubes into the fixture, ensuring the end of the tube that receives power is installed with the un-shunted tombstone.



## 3. Bright security lighting is paramount



It is paramount that the area around a utility plant is bright and safe, so that it can be secure. Older HID technologies like High Pressure Sodium with its low quality of light is not the answer. Metal Halide is better, but with short bulb life spans, replacing the bulbs that are no longer working will become a regular maintenance job.

In the early days of LED, high power solutions were not available. That is no longer an issue. With powerful options that can easily replace 2000W HID, or retrofit up to 1500W MH or HID and with warranties placed on products up to 10 years, these LED High Mast, Flood and Area Lights are designed to work and provide high quality light for years and years.





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MyLEDLightingGuide.com helps electrical contractors, facility managers at commercial and industrial companies, utilities, and municipalities save energy and improve light quality by selecting the proper, safe, and energy-efficient LED lighting in and around their facility. Electrical and lighting contractors and facility managers receive consultative support from the U.S. based staff. Time for delivery is reduced because MyLEDLightingGuide.com stocks much of what it sells in a U.S. based warehouse. LED retrofit solutions that can directly replace existing incandescent, metal halide (MH), high pressure sodium (HPS), fluorescent and halogen bulbs are our specialty. Since 2008, we have developed a series of eleven Ultra-high efficiency LED retrofit kits that can be installed in over 95% of existing fixtures on the market today.

### A Few of Our Customers



1 Chestnut Street  
Nashua, NH 03060  
1-888-423-3191  
[MyLEDLightingGuide.com](http://MyLEDLightingGuide.com)