

CASE STUDY: SIG

FLOOD LIGHT AND HIGH BAY



WYOMING OIL RIG DRILLS DOWN ON ENERGY AND COST SAVINGS WITH LIGHTING UPGRADE

SIG flood lights by EIKO were installed on an oil drilling rig in Wyoming, replacing 1500W metal halide lamps.

The True Drilling oil rig company had been considering replacing their metal halides with LED lighting for a few years. The SIG was appealing because of its high lumen output and 3G vibration rating – important features for this type of application. With the assistance of Crescent Electric, the company chose 600W SIG fixtures at 5000K as the optimal lighting solution for the replacement.

Key Considerations

The main issues with the metal halide lighting had included breakage during transport and setup of the rigs at new sites, breakage during operations from vibration, and relatively frequent burnout.

As the oil industry in Wyoming grows, more rigs are being recommissioned. As this happens, many rigs are being retrofitted, since changing out old lighting takes up time that could otherwise be used for production. A reduction of the time needed for installation and maintenance of a rig is essential to its success in current market conditions. Therefore a key consideration for this lighting project was to provide a light source that could withstand heavy vibration and maintain its initial light output for as long as possible.



Rigs operate on generator sets in remote locations rather than standard power grids, making energy efficiency especially important



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The SIG: An Ideal Solution

The SIG answered these needs perfectly. For a small install, it packed a huge return on the investment in terms of light quality, energy savings, and cost savings. The old metal halide lamps were replaced with yoke-mounted SIGs installed on top of the masts and fitted with visors to minimize light pollution, along with 60° focusing lenses to target the light where needed. Each SIG produces over 100,000 lumens at 167 lpw – one of the highest lumen packages on the market, and a night-and-day difference in efficiency vs. the metal halides they replaced.

Installation of the SIGs took less than a week after receiving the product. Improvements after install included a significant increase in lumen output, as well as a brighter, whiter, cleaner light that won't degrade as fast as HID, and increased production time and reduced maintenance downtime and costs due to constant replacement of light bulbs.



With 600W SIG fixtures producing over 100,000 lumens each, the rig sites are better lit and more energy and cost efficient than ever. In simple layman's terms, the crews have greater visibility on their operations.



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The move from 1500W metal halide lamps to 600W SIGs saved 900W per fixture. Additionally, each SIG has a lifetime of over 50,000 hours vs. the 3,000 hours of the metal halide lamps, which equates to a reduction of a minimum of 16 more metal halide lamps for every SIG installed – perhaps as many as 25 more, factoring in for breakage of lamps due to vibration.

This energy and maintenance savings directly impacts the bottom line of True Drilling's oil drilling operations due to the fact that these lights are operating on large generator sets in remote locations rather than a standard power grid.

