

industrial case study Oregon Iron Works, Inc.



Main Achievement/s:

- Increased light level while reducing energy costs
- Replaced 1000w with 450w while maintaining light levels
- Doubled the effective lamp life while maintaining light output

Background

Oregon Iron Works, Inc., is a pioneering force in the fabrication and manufacturing industries. Founded in 1944, the company began achieving success fabricating in the demanding hydroelectric, bridge and civil construction industries. From complex bridges to sophisticated military patrol craft, today the company also serves a variety of industries and customers, both nationally and internationally, that includes the marine, aerospace and nuclear fields.

United Streetcar is a subsidiary of Oregon Iron Works, Inc. dedicated to providing modern streetcars to cities across the nation. They are the only manufacturer of modern streetcars in the United States and manufactured the first modern Buy America compliant streetcar in the U.S. for the city of Portland, Oregon. The streetcar provides a Green Choice for urban transit needs.

Original Situation

The United Street Car fabrication facility was being used for warehouse storage and offices. The existing lighting system consisted of 400w and 1000w Metal Halide High Bays. The fixtures were aging, lamp and ballast failures were common and light output was less than optimal. Therefore important considerations included:

- Lamp and ballast life
- Light output
- Energy savings

Snapshot

Energy Savings
26%
while increasing lighting levels

Lamp Power

50 x 400w and 9 x 1000w unified to 450w solution

Annual kWh Saved

62,736

Annual CO² Saved

24 metric tons

Simple Payback Period

3.4 years

Total Annual Saving

\$4,472

The Result

The North Coast Electric Energy Solution team determined that Metal Halide High Bays with Metrolight Electronic SmartHID™ ballasts were the answer for this application for various reasons:

- Energy efficient lighting solution
- Increased light levels while still reducing energy costs by 26%
- Replaced 1000w with 450w while maintaining lighting levels
- Technology effectively doubles lamp life while maintaining light levels
- Significantly reduced maintenance costs (approximately 50%) due to extended lamp life



Before Dimming 400w and 1000w Metal Halide High Bays

Our criteria for choosing a lighting solution included longer lamp life, light output and energy savings. We were thrilled to learn that with the retrofit kit solution we were able to increase light levels and still achieve energy savings. We were also looking for a green solution that would complement our Green Choice transit solution. We found it with Metrolight and managed to reduce our carbon footprint and get more light for longer.”

Oregon Iron Works Management



After Dimming 450w Retrofit Kit Solution with New Reflectors

Features	Before Installation	After Installation	Savings
Fixture Power Consumption (Parking Lot/Canopy) W	100/400	450	450/-50
Operating Hours/Days	24/365	24/365	-
Annual lighting-related energy cost	\$16,072	\$11,869	\$4,472
Total annual savings		\$4,472	
Simple Payback	3.4 Years (Including Incentive)		

Integration Partner

CONNECTIONS FOR CONSERVATION

Connections for Conservation is a certified lighting management consultant and specializes in energy conservation. We work with Utility Companies, Manufacturers and Contractors in the designing, distribution and promotion of energy efficient technology. We are a member of the Northwest Trade Ally Network and serve over 325 counties in WA, OR, ID, MT and CA. For more information please visit www.connectionsforconservation.net

CONNECTIONS FOR CONSERVATION

Distribution Partner

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ISRAEL OFFICE (Corporate Head Office)

Metrolight Ltd. T +(972) 9.863.3060
9 Haomanut Street F +(972) 9.863.3050
P.O. Box 8194
Netanya, 42160

U.S. OFFICE

Metrolight Inc.
1724-B General George Patton Dr.
Brentwood, TN, 37027
T 615.457.2060
F 615.457.2063

www.metrolight.com