

NUCOR

Nucor Steel-Texas

Nucor Steel is a leading global producer of hot-rolled carbon steel products, including concrete reinforcing steel, special shapes, and structural components. At its rebar plant in Jewett, Texas, Nucor faced a persistent challenge with its high-bay lighting system, which resulted in high maintenance costs and operational inefficiencies.

Key Metrics

Annual Savings: \$ 534,850

- ROI driven by 75% energy savings and elimination of maintenance costs

- Annual CO2 Reduction: 1,265 Metric tonnes



Discover how our innovative solutions can benefit you.



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Rebar Plant Jewett, Texas

75%
Saved

CHALLENGE

- **Rapid lumen loss** – Metal halide fixtures quickly dimmed, reducing visibility.
- **High maintenance costs** – Re-lamping every six months was costing \$38,000 annually.
- **Heat degradation** – 150°F plant temperatures accelerated lamp failure.

SOLUTION

Nucor needed an LED High Bay that could match the powerful output of a 1000W Metal Halide while withstanding extreme ambient temperatures of up to 150°F during the summer months.

500-1000w Metal Halide High Bays >> 500 250w LED High Bays

BENEFITS

The LED High Bays installed delivered:

Long-lasting Performance: 200,000 Hours (L70)

Onboard thermo-couple: A software that detects temperature of LED modules and dims lights during extreme temperatures.

Significant Energy Savings: 75% energy reduction, saving 3,277,500 kWh annually.

1

Energy Use

- Annual Energy Use Before: 4,370,000 kWh
- Annual Energy Use After: 1,092,500 kWh

2

Electricity Cost

- Annual Electricity Cost Before: \$611,800
- Annual Electricity Cost After: \$152,950

3

Energy Savings

- Yearly Energy Savings: \$458,850
- Yearly Maintenance Savings: \$76,000
- Yearly Savings: \$534,850