

CASE STUDY

Equipment Manufacturing Plant Achieved \$2.34M in Five-Year Savings

How one heavy-equipment manufacturer eliminated battery downtime, reduced fleet size, and cut energy costs

30

Lift Trucks

16

**Operating Hours
Per Day**

52

**Operating Weeks
Per Year**

THE CHALLENGE

The facility operated 30 lift trucks powered by flooded lead-acid batteries across a two-shift manufacturing operation, with dual batteries per truck, 60 in total, requiring constant swapping, charging, and maintenance.

Manual battery changes regularly pulled operators away from production work, while frequent battery downtime disrupted material handling and line-side replenishment. Compounding these inefficiencies, the lead-acid chemistry limited scalability for growing production demands.

**Five-year operational cost
with lead acid batteries:**

\$3.82M

This case study represents actual results achieved through Flux Power deployment. Results will vary for everyone based on different fleet requirements.



Talk to an Energy Expert



877-505-3589



marketing@fluxpower.com

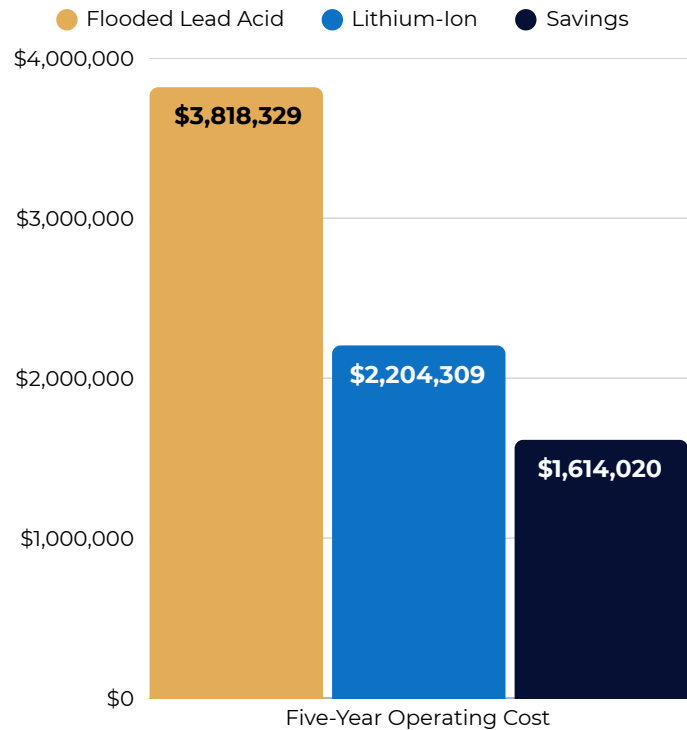


www.fluxpower.com

THE SOLUTION DEPLOYED

Flux Power installed 32 kWh lithium-ion battery packs, one per truck, paired with an opportunity-charging strategy that leveraged breaks, meals, and shift transitions to keep the fleet running continuously. This approach eliminated the previous 2:1 battery ratio, replacing all 60 lead-acid units with a single lithium-ion pack per truck, while opportunity charging during natural production pauses removed the need for manual battery swaps.

As a result, daily battery handling and maintenance complexity dropped significantly, and the facility optimized its fleet from 30 trucks down to 28 based on the improved duty cycle performance enabled by the new lithium-ion system.



WHAT THEY ACHIEVED

\$2.34M

Five-Year Total Savings

\$1.61M

Reduced Operating Costs

60 -> 28

Battery Reduction

2

Truck Reduction Optimization

This case study represents actual results achieved through Flux Power deployment. Results will vary for everyone based on different fleet requirements.



Talk to an Energy Expert

877-505-3589

marketing@fluxpower.com

www.fluxpower.com

OPERATIONAL PERFORMANCE

29%

ELECTRICITY COST REDUCTION:

Declined from \$61,666 to \$43,662 over the measurement period, a 29% improvement in energy efficiency

50%

MAINTENANCE EFFICIENCY:

Preventive maintenance intervals extended from 250 to 500 hours, reducing technician labor by approximately 50%

1

UPTIME IMPROVEMENT:

One-battery-per-truck design eliminated mid-shift battery changes, supporting continuous two-shift production

15

PRODUCTIVITY GAIN:

Throughput increased from 14 to 15 pallets per truck hour, allowing the operation to handle the same material movement with fewer assets

BEYOND THE NUMBERS

The shift to lithium-ion energy transformed how this facility manages its fleet. Maintenance teams now follow a predictable 500-hour service cycle instead of responding to random battery failures. Operators spend their time moving material, not swapping batteries.

This case study represents actual results achieved through Flux Power deployment. Results will vary for everyone based on different fleet requirements.



Talk to an Energy Expert



877-505-3589



marketing@fluxpower.com



www.fluxpower.com

FLUX POWER

Ready to See What Lithium-ion Could Save Your Fleet?

Discover how lithium-ion energy could transform your operation with a custom fleet assessment.

Get Your ROI Estimate

2685 S. Melrose Drive, Vista, CA 92081 | 877.505.3589 | fluxpower.com