

LITHIUM-ION ENERGY SOLUTIONS

Fleet Impact Assessment

Real fleet operating data demonstrates the potential financial and operational impact of transitioning from lead-acid batteries to Flux Power lithium-ion energy solutions.

POTENTIAL RESULTS

- ✓ Up to \$2M+ Reduction in Total Cost of Ownership
- ✓ Eliminate Battery Maintenance
- ✓ Reduce Energy Costs by up to 75%
- ✓ Increase Equipment Availability
- ✓ Fleet Intelligence via SkyEMS Platform

EXECUTIVE SUMMARY

Industrial fleet operators face mounting pressure from rising energy costs, maintenance overhead, and equipment downtime. Flux Power lithium-ion solutions directly address these challenges, delivering measurable savings across every operational parameter that affects your bottom line.

COMMON CHALLENGES

- ✓ Battery watering & equalization
- ✓ Multiple battery swaps per shift
- ✓ Dedicated battery rooms required
- ✓ Significant downtime between shifts
- ✓ Rising utility and energy costs
- ✓ No/limited real-time fleet visibility

POTENTIAL OUTCOMES

- ✓ Maintenance-free operation
- ✓ Opportunity charging, no swaps
- ✓ Reclaim battery room sqft
- ✓ One battery per truck
- ✓ Up to 75% reduction in energy cost
- ✓ Real-time analytics via SkyEMS

POTENTIAL FIVE-YEAR SAVINGS

\$2 Million+

Based on high-utilization manufacturing fleet scenario

KEY DRIVERS

- Increased Uptime ✓
- Maintenance Elimination ✓
- Energy Cost Reduction ✓
- Fewer Batteries Required ✓

Real Fleet Data. Real Operational Insights.

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OUR ASSESSMENT PROCESS

Every fleet impact assessment is built on your actual operating data — not industry averages or generic estimates. Our six-step methodology delivers a clear, defensible financial projection you can present to leadership with confidence.

1

Current State Assessment

Document fleet size, battery types, shift structure, and facility layout

2

Energy Usage Analysis

Review utility bills, charging patterns, and consumption rates per truck

3

Maintenance Cost Review

Calculate total annual spend on watering, equalization, and labor

4

Fleet Utilization Review

Analyze uptime, swap frequency, and productivity loss due to downtime

5

5-Year Cost Projection

Model total cost of ownership across both technologies over 60 months

6

Potential Savings Analysis

Present delta — where Flux Power saves money and by how much

Data Source: Based on actual fleet operating profiles from manufacturing, distribution, and logistics operations. Individual results will vary based on fleet size, utilization, and energy rates.

Equipment Manufacturing Fleet

FLEET PROFILE

30

FORKLIFTS

2

SHIFTS / DAY

60

LEAD ACID

30

LITHIUM-ION

5-YEAR COST COMPARISON

COST CATEGORY	LEAD ACID	LITHIUM-ION
Initial Investment	\$2,145,000	\$1,986,000
Battery Maintenance (5 Yr)	\$1,365,000	\$0
Energy Cost (5 Yr)	\$308,329	\$218,309
Infrastructure	*Costs varies by location, local electrician fees, and more	
5-Year Total Cost of Ownership	\$3,818,329	\$2,204,309

POTENTIAL SAVINGS

\$1.4M+

OVER 5 YEARS

LEAD ACID TO LI-ION

Maintenance Elimination	\$1,365,000
Energy Cost Reduction	\$90,020
Battery Fleet Reduction	%50



POTENTIAL SAVINGS TOTAL CO2
EMISSIONS (5 YEARS)

13.88 Tons

Meat Distribution Fleet

FLEET PROFILE

15

FORKLIFTS

2

SHIFT/DAY

15

PROPANE FORKLIFTS

30

LEAD ACID

15

LITHIUM-ION

5-YEAR COST COMPARISON

COST CATEGORY	PROPANE	LEAD ACID	LITHIUM-ION
Initial Investment	\$420,000	\$1,072,500	\$993,000
Maintenance Cost (5 Yr)	\$682,500	\$682,500	\$0
Energy / Fuel Cost (5 Yr)	\$1,285,034	\$154,165	\$109,155
Infrastructure	*Costs varies by location, local electrician fees, and more		
5-Year Total Cost of Ownership	\$2,387,534	\$1,909,165	\$1,102,155

POTENTIAL SAVINGS

\$1.8M+

OVER 5 YEARS

PROPANE TO LI-ION

Maintenance Elimination	\$682,500
Energy Cost Reduction	\$1,175,879
Battery Fleet Reduction	-

POTENTIAL SAVINGS

\$0.8M+

OVER 5 YEARS

LEAD ACID TO LI-ION

Maintenance Elimination	\$682,500
Energy Cost Reduction	\$45,010
Battery Fleet Reduction	\$79,500



POTENTIAL SAVINGS TOTAL CO2
EMISSIONS (5 YEARS)

107.28 | 19.85 Tons
Propane to Li-ion (Lead Acid to Li-ion)

Logistics Warehouse Robotics Fleet

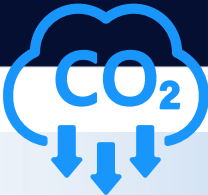
FLEET PROFILE

12 FORKLIFTS	3 SHIFTS / DAY	36 LEAD ACID	12 LITHIUM-ION
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5-YEAR COST COMPARISON

COST CATEGORY	LEAD ACID	LITHIUM-ION
Initial Investment	\$3,750,000	\$3,288,000
Battery Maintenance (5 Yr)	\$819,000	\$0
Energy Cost (5 Yr)	\$123,332	\$87,324
Infrastructure	*Costs varies by location, local electrician fees, and more	
5-Year Total Cost of Ownership	\$4,692,332	\$3,375,324

POTENTIAL SAVINGS	LEAD ACID TO LI-ION	
\$1.3M+	Maintenance Elimination	\$819,000
	Energy Cost Reduction	\$36,008
	Battery Fleet Reduction	\$462,000
	OVER 5 YEARS	



POTENTIAL SAVINGS TOTAL CO2
EMISSIONS (5 YEARS)

10.61 Tons

Four Drivers of Financial Impact

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WHERE THE SAVINGS COME FROM

Lithium-ion doesn't save money in one area. It restructures your entire battery operating model. Here's how the economics work across four distinct cost drivers.



MAINTENANCE ELIMINATION

- No battery watering or equalization
- No dedicated maintenance labor
- No acid spills or cleanup
- No compliance requirements
- Average savings: \$8–22K / year per fleet



ENERGY EFFICIENCY

- Up to 30% lower energy consumption
- No cooling or ventilation requirement
- Opportunity charging reduces peak demand
- No energy wasted on equalization cycles
- Average savings: \$3–9K / year per fleet

3×

Lead-acid fleets require an average of 3 batteries per truck to support multi-shift operations. Flux Power lithium-ion requires just one, dramatically reducing your capital investment and storage footprint from day one.



OPPORTUNITY CHARGING

- Charge during breaks — no battery swap
- Eliminates swap labor (15–20 min/swap)
- One battery handles multi-shift operation
- No idle time between shifts
- Average productivity gain: 8–12%



FLEET SIMPLIFICATION

- 3:1 battery reduction (one per truck)
- Eliminate battery room infrastructure
- Reclaim 200–800 sq ft of floor space
- Reduce capital tied up in battery inventory
- Simplified procurement and lifecycle mgmt

OPERATIONAL IMPACT

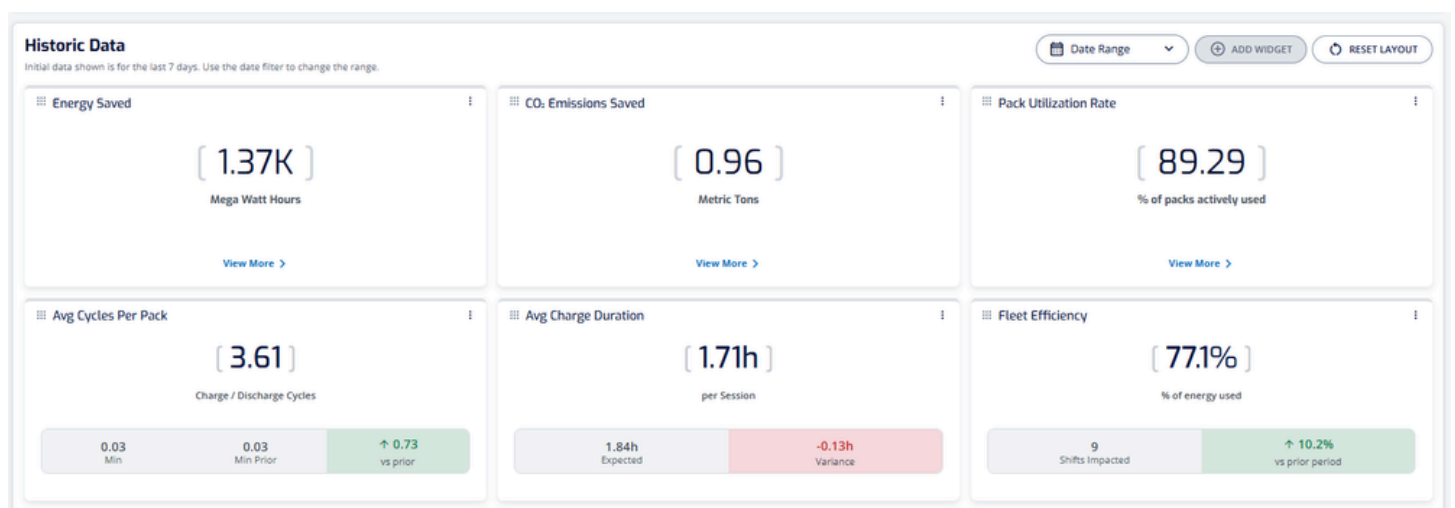
Financial ROI is the headline, but operators who've made the switch consistently report operational improvements that compound the value over time.

OPERATIONAL ADVANTAGES

- ✓ More uptime per shift, no swap downtime
- ✓ Better throughput and pick rates
- ✓ Reduced dock and aisle congestion
- ✓ Faster charging during breaks
- ✓ No battery room traffic or hazards
- ✓ Consistent power delivery across full charge
- ✓ Compatible in hot or cold environments, no performance loss

STRATEGIC ADVANTAGES

- ✓ Real-time fleet visibility via SkyEMS
- ✓ Predictive maintenance alerts
- ✓ State-of-health data for every battery
- ✓ Custom dashboards for operations teams
- ✓ Sustainability and ESG reporting
- ✓ Reduced carbon footprint
- ✓ Support for electrification initiatives

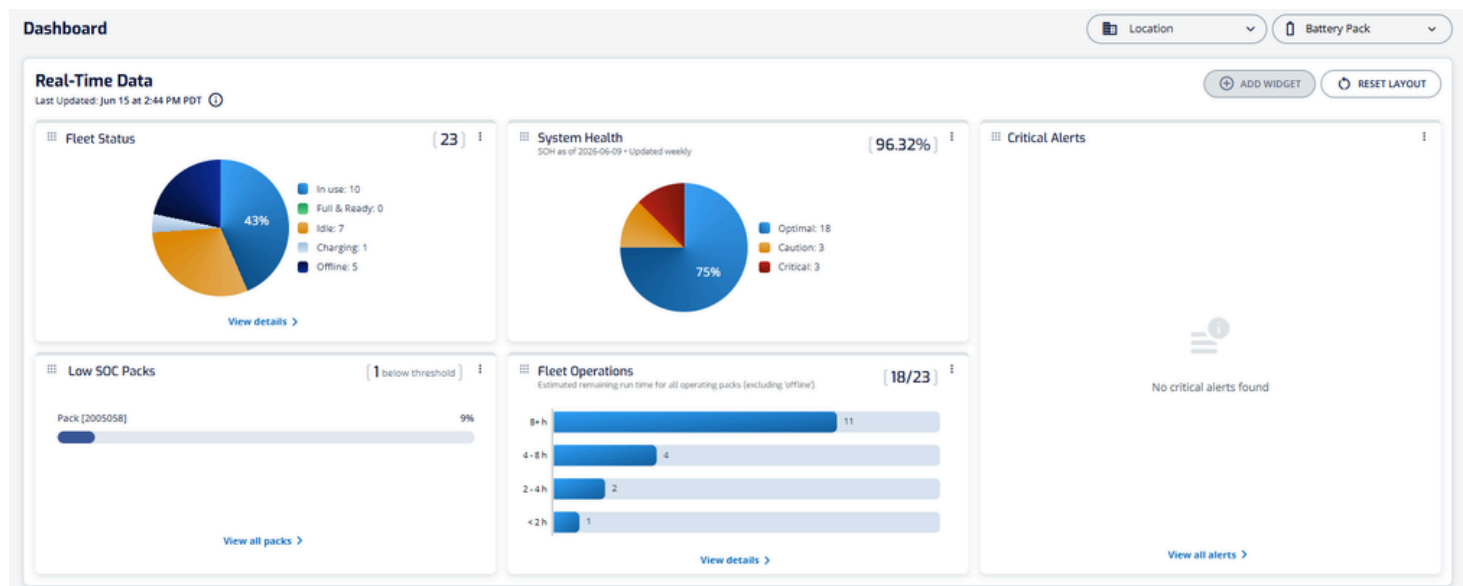


Energy Intelligence Included

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SKYEMS PLATFORM

Every Flux Power lithium-ion battery can integrate with SkyEMS — our cloud-based energy management solution that transforms batteries from a passive expense into an active strategic asset.



REAL-TIME MONITORING

Track every battery's state of charge, temperature, and cycle count — live.

REMOTE DIAGNOSTICS

Identify issues before they become failures. Eliminate reactive maintenance.

CUSTOM DASHBOARDS

Configure views for operations, finance, and executive teams.

AI-DRIVEN INSIGHTS

Predictive alerts and utilization recommendations powered by fleet data.

"Flux Power SkyEMS telematics is not just a tool; it's a solution that empowers fleet managers with real-time insights" - Andrew Carducci, Averest Engineering and Product Support Manager

NEXT STEPS

What Could Your Fleet Save?

Schedule a customized Lithium-Ion Fleet Impact Assessment with Flux Power. We'll analyze your actual operating data and deliver a tailored projection — at no cost.

YOUR FLEET PROFILE

Fleet Size (# of forklifts)

Shifts Per Day

Current Battery Type

Estimated Annual Savings

Let's Find Out →

CALL US
877.505.3589

VISIT ONLINE
www.fluxpower.com

REQUEST ASSESSMENT
Schedule Now →