

UNICARRIERS
FORKLIFT

EFFICIENCY + ECONOMY

THE STRATEGIC SHIFT

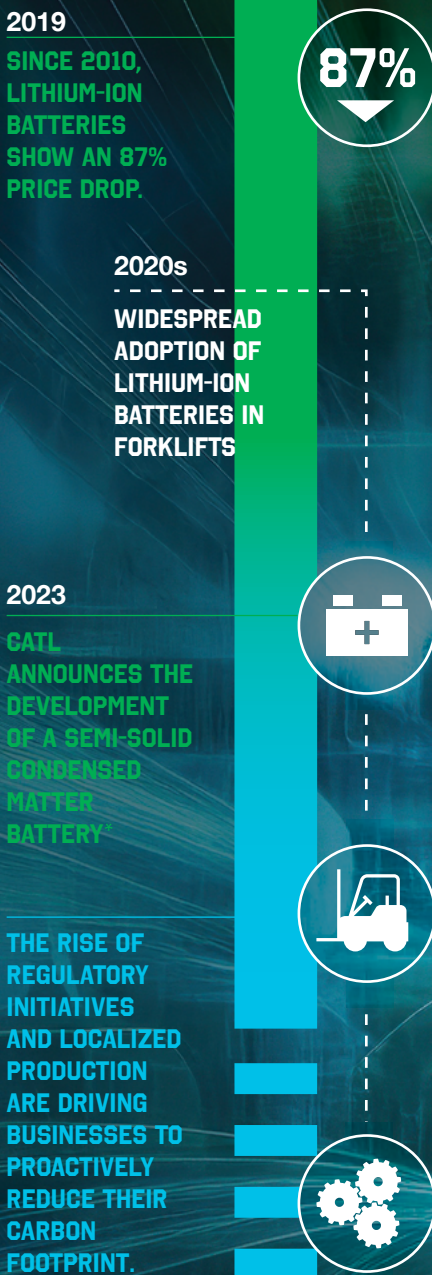
FROM INTERNAL COMBUSTION (IC)
TO ELECTRIC



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TIMELINE OF REGULATORY CHANGE



AN INDUSTRY IN TRANSITION

The material handling industry is evolving rapidly, shifting from traditional internal combustion (IC) engines to more sustainable and efficient electric forklifts. Business leaders are increasingly driven to meet more robust sustainability initiatives, lower operational costs, and increase workplace efficiency. At UniCarriers, we are committed to supporting businesses in achieving their goals as they navigate stricter and evolving environmental regulations.

Our advanced electric forklift solutions not only comply with the regulatory demands but also significantly lower the total cost of ownership – a critical concern for our clients.

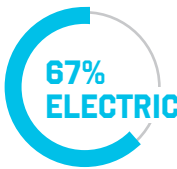
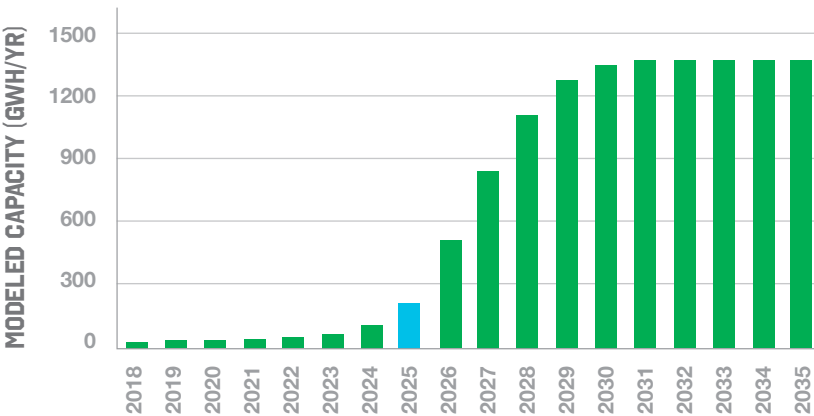
Transition from IC to electric: why it matters to you

The electric forklift sector is growing exponentially. It is fueled by increasing regulatory demands, and a growing emphasis on sustainability. In fact, the market is projected to expand at a compound annual growth rate (CAGR) of approximately 14.4% from 2024 to 2030 (Figure 1). However, regulations aren't the only thing driving this surge. Technological advancements and decreasing lithium-ion battery costs are making electric forklifts more appealing and more affordable across many industries, including e-commerce, retail, and logistics – sectors that particularly value the efficiency and quick operational turnaround offered by electric forklifts.

PLANNED LITHIUM-ION CELL PRODUCTION CAPACITY IN NORTH AMERICA

FIGURE 1

Source: U.S. Department of Energy, Argonne National Laboratory, "Quantification of Commercially Planned Battery Component Supply in North America through 2035," March 2024.



The current market share of electric versus IC forklifts is 67% electric vs 33% IC

Source: the Industrial Truck Association as reported by the Battery Council International.

WHAT'S DRIVING CHANGE?

Historical shift and adoption rate

Today, businesses are adopting cleaner technologies to achieve sustainability objectives and meet increasing regulatory pressures for lower emissions—a trend that is reshaping the industry. Corporations worldwide are setting aggressive sustainability targets, and transitioning their material-handling fleet to electric is often a practical step toward those broader goals. Compared to electrifying entire vehicle fleets or sourcing renewable energy, switching to electric forklifts presents a more immediate and achievable way to reduce emissions and improve operational efficiency. As sustainability efforts grow, regulations like those proposed by the California Air Resources Board (CARB) could become more prevalent, prompting businesses to explore proactive solutions for reducing carbon footprint.

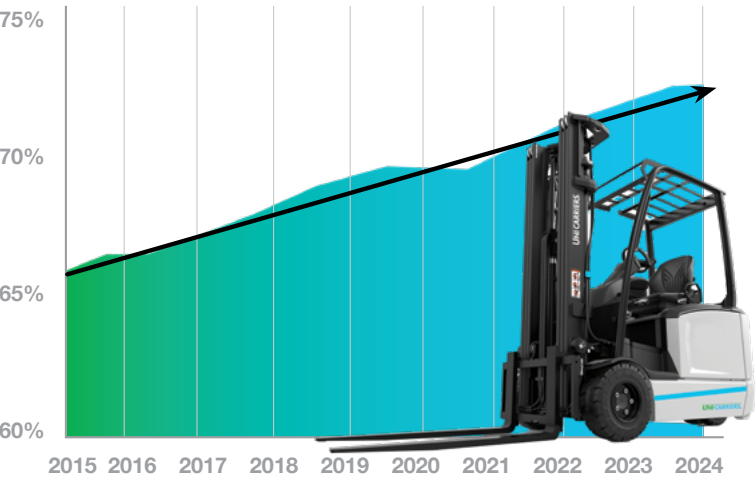
At UniCarriers, we're not just observing these changes; we're actively preparing for them. We understand the challenges and opportunities corporate sustainability initiatives may bring. Our electric forklifts are designed to meet these new standards, while offering significant operational cost savings and enhanced efficiency. This makes transitioning to new technologies smooth and seamless, enabling you to stay ahead of regulatory demands and future-proof your operations. We encourage our partners to remain engaged in these discussions, as the outcomes will have significant implications on operational and investment decisions.

THE HISTORICAL SHIFT TO ELECTRIC

FIGURE 2

In the last 10 years, the electric mix has grown by 5%.

The shift is driven by the natural expansion of distribution center applications and customers slowly looking for efficiency gains.



UNICARRIERS' ADVANCED ELECTRIC SOLUTIONS

At UniCarriers, we understand that features only become solutions when they solve real-world challenges. That's why our electric forklifts are designed not just to comply with regulations but to significantly enhance your operational efficacy and resolve specific workplace challenges:



Longer run times with advanced battery technology

Our lithium-ion and advanced lead-acid batteries don't just last longer; they recharge faster and reduce downtime significantly. This means your fleet stays operational longer, enhancing productivity without frequent stops for recharging.



Enhanced operational efficiency with regenerative braking systems

Our forklifts extend operational times between charges by converting braking energy back into battery power. This feature is crucial in high-demand environments, reducing the frequency of charges and minimizing maintenance needs.



Precise maneuverability with intelligent curve control

Safety in tight spaces is paramount. Our intelligent curve control adjusts speeds automatically during turns to support reliable operation where it's most needed — in crowded warehouse environments.



Reliability in tough applications with IP54 rated sealed motors

These motors are built to withstand harsh conditions, protecting against dust and water ingress and ensuring the forklifts' reliability across diverse operational environments.



Tailored performance with customizable settings and ergonomic features

Optimize your forklifts' performance to match specific tasks with customizable settings and ergonomic designs that improve operator comfort and overall efficiency.



Enhanced warranty on battery lifecycles

We back our advanced battery technology with improved warranty terms that promise more cycles and longer life, ensuring that your investment is protected over a longer period.

UNDERSTANDING TECHNOLOGIES

IC FORKLIFTS VS. ELECTRIC FORKLIFTS

Choosing between internal combustion (IC) and electric forklifts is a strategic decision that impacts not only your daily operations but also your long-term business goals. While IC forklifts bring raw power for high-demand applications, they also incur higher maintenance costs and emissions.

Electric forklifts, however, are quieter, cleaner, and cheaper to operate over time, making them ideal for indoor use and operations looking to cut long-term costs and meet environmental standards.

IC FORKLIFTS

Known for their power and durability, IC forklifts are fueled by diesel, gasoline, or propane. They excel in high-demand applications where robust performance is crucial. However, they pose challenges such as higher emissions and increased maintenance costs, which can affect overall operational efficiency and environmental compliance.



Enhanced operational efficiency



Regenerative braking system



Meets air quality regulations



Energy-efficient batteries

OPERATIONAL CONSIDERATIONS

When choosing between IC and electric forklifts, consider factors such as the typical workload, the work environment, and the availability of charging infrastructure for electric models or fueling options for IC models. Electric forklifts may require initial infrastructure investments, such as charging stations, but the long-term benefits of lower fuel costs and fewer emissions can outweigh these upfront costs.



ELECTRIC FORKLIFTS

These forklifts are celebrated for their zero exhaust emissions and reduced noise levels, making them particularly beneficial in indoor settings or environments with strict air quality regulations. Not only do they contribute to a healthier workplace, but their lower operational costs over time can also result in significant savings. Electric forklifts are equipped with advanced technologies such as regenerative braking and energy-efficient batteries, enhancing their operational efficacy and aligning with global sustainability goals.

COST ANALYSIS: IC VS. ELECTRIC

Despite higher upfront costs, electric forklifts often lead to lower total ownership costs due to reduced operational and maintenance expenses. This is particularly critical for businesses focused on long-term cost savings. Additionally, these upfront costs may be offset by various government and industry incentives.

STREAMLINING CONVERSION WITH STRATEGIC PARTNERSHIPS

Transitioning to electric forklifts is facilitated by collaborative efforts with energy partners committed to sustainability. Numerous utilities and energy companies offer substantial support for the electrification of material handling equipment, aligning with broader environmental goals. This support typically manifests as rebates, grants, and expert technical assistance, aiding businesses in upgrading their operations and reducing their carbon footprints. For instance:

Salt River Project (SRP)

Based in Arizona, SRP provides up to \$2,000 per forklift in rebates for businesses that replace internal combustion-powered forklifts with electric models. Additionally, a \$500 rebate is available for first-time electric forklift purchases or when adding to existing fleets. SRP extends similar incentives for other electric-operated equipment like ride-on scrubbers, sweepers, and pallet jacks.

EnergyRight Program by Tennessee Valley Authority

This program offers a \$1,000 incentive for leasing new or refurbished Class 1 or Class 2 electric forklifts and a \$250 incentive for Class 3 electric forklift leases. These incentives are particularly aimed at businesses looking to expand their fleets or replace older Class 4 or Class 5 forklifts.



Rebates, grants, and technical assistance programs available

Rebates
Up to \$2,000 per forklift

Incentives
Up to \$1,000 incentives for leasing new or refurbished electric forklift mo

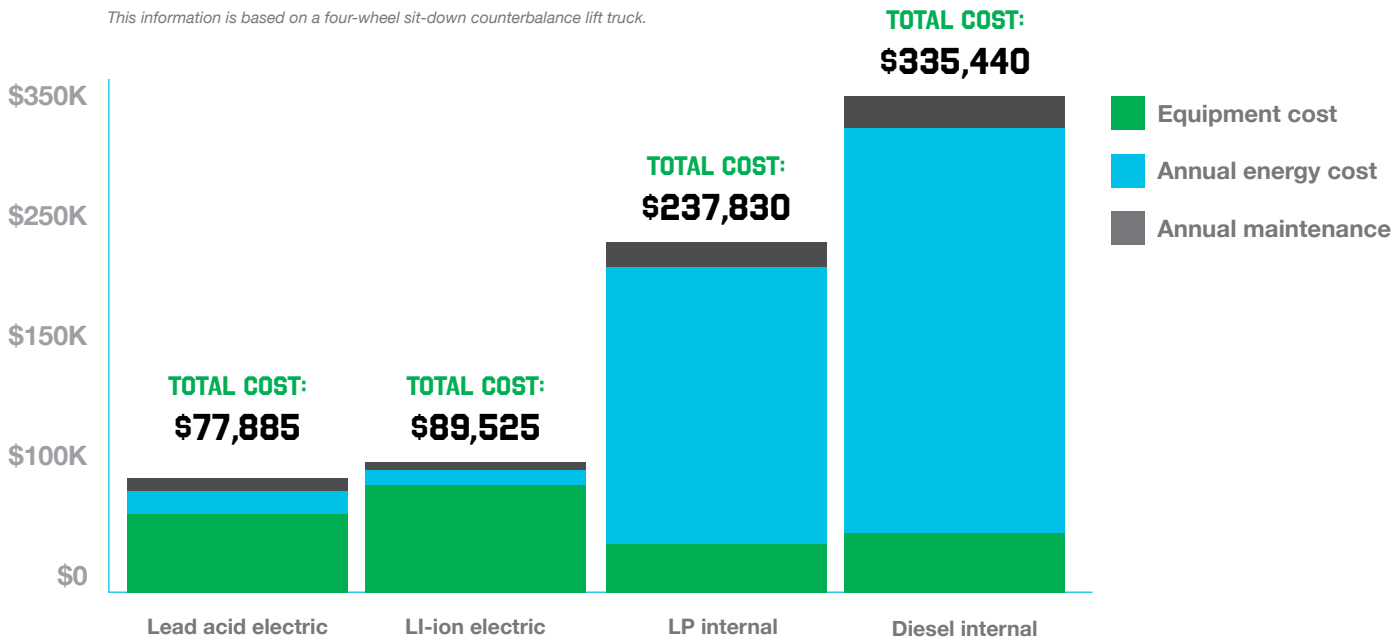
ROI CALCULATION: Understanading the payback period

The favorable payback periods associated with electric forklifts make them a smart investment for businesses looking to enhance operational efficiency and reduce long-term costs. The switch to electric can deliver a favorable payback period within the first two years of ownership through reduced fuel costs and maintenance expenses.

TOTAL COST OF OWNERSHIP OVER FIVE YEARS

FIGURE 3

This information is based on a four-wheel sit-down counterbalance lift truck.

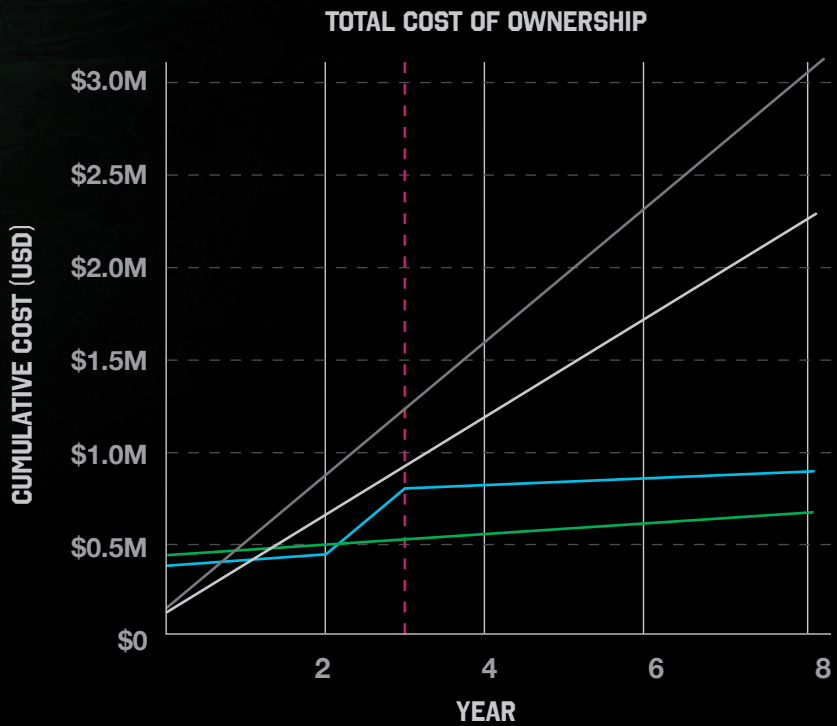


RETURN ON INVESTMENT OVER TIME: ELECTRIC VS. IC FORKLIFTS

FIGURE 4

Calculations are based on a fleet of 30 lift trucks, each equipped with 2 lead-acid batteries, operating in two 6-hour shifts per day, five days a week.

- Li-ion electric
- Lead acid electric
- LP internal combustion
- Diesel internal combustion
- Lead acid battery replacement



CONCLUSION

As the material handling industry continues to evolve, understanding your options is key. From incentives and infrastructure planning to operational efficiency and long-term ROI, transitioning to electric is more than a purchase — it's a strategic shift.

If you're exploring what electrification might look like for your fleet, UniCarriers offers resources and expert guidance every step of the way.

Learn more or connect with a local dealer at: [MyUniCarriers.com](https://myunicarriers.com)

By partnering with UniCarriers, you are investing in a future where efficiency and environmental responsibility go hand in hand, reinforcing our commitment to your success and to a more sustainable world.

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