

# A logistic platform at its best.

The case study collaboration with a major retail/hypermarket chain.



## The case

### Project:

Optimizing logistics efficiency through advanced battery management as part of the customer's warehouse relocation

### Customer/Project:

Major hypermarket chain in France

### Installed system:

- E/Vented Material Handling batteries with high-frequency chargers (2100 SP and 2100 HP)
- IBOS battery management system
- Magnetic transfer systems for safe battery swaps
- Demineralized water production system
- Clear floor markings and structured layouts

### Installed battery capacity:

Approximately 110 batteries  
24V 465Ah and 48V 775Ah

### Installation date:

2024

It's not about replacing old against new. It's about using future-driven technology that strengthens efficiency and keeps the hypermarket's operations running while minimizing the environmental impact.

## The scenario

The hypermarket relocated its logistics operations a few kilometres from the original site to a brand-new 80,000 m<sup>2</sup> warehouse. The previous site, over 50 years old, was outdated, energy-intensive and inefficient. Its internal layout caused workflow disruptions and loss of storage space. Multiple charging rooms made battery monitoring and maintenance more complex.

Exide Technologies was chosen to design and implement a fully optimized charging solution for nearly 260 devices, some equipped with dual battery systems, ensuring operational continuity and supporting advanced logistics.

# The challenges

1

**Aging infrastructure** and dispersed charging rooms complicated battery monitoring and maintenance.

2

**Inefficient battery charging cycles** and limited visibility for forklift operators led to downtime and reduced productivity.

3

**Safety risks due to manual battery handling** and overhead battery transfers.

4

**Inadequate forklift parking**, resulting in workflow disruptions and low team morale.

# The objectives

- Optimize space usage, including charging room layouts and forklift parking zones.
- Integrate cold chain mechanization.
- Reduce energy consumption.
- Achieve partial energy self-sufficiency with a photovoltaic (PV) roof covering one-third of energy needs.
- Improve operational efficiency and workflow.
- Enhance working conditions and safety for forklift operators.
- Ensure charging room meets operational demands of a large-scale logistics platform.

# The solution

Exide Technologies conducted an in-depth energy assessment and implemented a tailored solution:

**IBOS battery management system:**

Ensures structured forklift battery rotation through a First In, First Out (FIFO) system. Extends battery lifespan and reduces wear.

**High-frequency chargers (2100 SP and 2100 HP):**

Fifteen percent more energy-efficient. Low consumption, high performance.

**Optimized charging room layout:**

Consolidated charging areas for better monitoring and accessibility. Floor markings to designate forklift parking zones and integration of new and existing battery packs.

**Demineralized water production system:**

Automated battery refilling for enhanced maintenance.

**Magnetic transfer systems:**

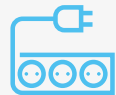
Four units installed for safe and efficient battery swaps.



## The highlights



Electrical configuration of the charging room completed in two weeks.



More than 42 linear meters of roller tables, charger supports and cable holders.



Some existing equipment recovered and reused.



Setup and configuration of three FIFO battery managers with controllers and display screens.



Installation of new devices.

## User benefits



**Cost savings:** Reduced battery renewals, maintenance and energy expenses.



**Enhanced working conditions:** Safer operations for forklift operators, reducing risks from manual handling.



**Increased efficiency:** Optimized battery availability minimized downtime and enhanced productivity.



**Sustainability:** Partial electricity autonomy with a photovoltaic roof covering one-third of the facility's energy consumption.

## The results

The transition to Exide Technologies' battery management solutions transformed the hypermarket's logistics operations:

**2** weeks

rapid and completed implementation with minimal disruption to operations



**100%**

efficient workflows



Significant cost savings achieved in energy consumption and maintenance

**42** running meters

of technical excellence



**Longer**

battery lifespan and fewer breakdowns



**Smart integration**

of new and existing batteries



# A perfect match

The hypermarket praised Exide Technologies' expertise in delivering a high-performance energy solution, strengthening their long-term partnership. With bolstered battery management and infrastructure, the retailer now enjoys greater control, efficiency and stability in logistics operations.

This project sets a benchmark for innovative battery management in logistics with a holistic view of customer operations. As a global leader in energy storage, Exide Technologies remains committed to supporting businesses worldwide in transitioning to more profitable and more environmentally sustainable energy solutions.

## About Exide Technologies

Exide Technologies ([www.exidegroup.com](http://www.exidegroup.com)), headquartered near Paris, France, is a leading provider of advanced energy storage solutions for the automotive and industrial markets. It designs, manufactures and markets today's and next-generation battery technologies used across a wide range of applications, from automotive and off-road to material handling, stationary, rail and defense. Exide Technologies serves the global markets with leading battery technologies, know-how & added-value services under many well-known brands.

As an original equipment manufacturer to leading automotive and industrial equipment manufacturers, Exide Technologies has been involved in many of the significant breakthrough energy-storage developments that are enabling innovation across the markets. With two R&D facilities, 10 production plants and three recycling plants in Europe, Exide is committed to high quality engineering, manufacturing and recycling, and energizes the world with the most efficient energy solutions, helping customers maximize productivity and performance. Exide Technologies is serving the markets with products and services of an annual value of ~1,5bn Euro.

## Creating the future - the Exide way:



**Innovation**



**Reliability**



**Sustainability**



**High Performance**