CASE STUDY:
FreezPak Logistics

FreezPak is a leading New Jersey-based frozen food distributor. For over 50 years Saoud Enterprises, owner and operator of FreezPak, has been faithfully and proudly serving the food industry, making FreezPak one of the leading full-service cold and dry storage facilities in the United States.

THE POWER PLAYERS

Michael Saoud
Co-President
Focuses on overall corporate operations solutions that enable FreezPak to provide best-in-class cold storage warehousing while enhancing corporate sustainability.

David Saoud
Co-President
Manages FreezPak's business administration and sales, making sure that the company's enhanced productivity is put to good use with new customers.

Phil DeMedici
Operations Manager, FreezPak Paterson, NJ facility
Keeps operations and fleet management running smoothly and efficiently so that FreezPak can deliver great service to their growing customer base.

THE SITUATION

FreezPak's New Jersey facilities operate "around-the-clock" five to seven days a week, focusing on delivering products to market efficiently with industry-leading quality. Cold storage and freezer facilities are tough on batteries. Before FreezPak switched to fuel cells, lift operators were required to take multiple fifteen minute breaks each morning and afternoon as well as using their lunchtime to fast-charge the forklift batteries. This was necessary to complete each ten-hour work shift. The drooping batteries meant they had to choose between full power for moving product and heat for their backrests. The cold sapped both the battery power and staff morale.

Co-owners Michael and David Saoud and Operations Manager, Phil DeMedici searched for a solution that would improve operations productivity and predictability as well as conditions for their workers. If it was easy on the environment, even better. When FreezPak was introduced to Plug Power's GenDrive hydrogen fuel cells, they found the solution they were after, quickly implementing fuel cells and hydrogen into their forklift truck fleets.

> **"We move 40% more volume during a 9-hour shift with fuel cells than we did with batteries," said Phil DeMedici. "And our drivers are happier because they can do their jobs efficiently and comfortably."**

PLUG POWER

POWERING POSSIBILITIES

In its Carteret, New Jersey facility, FreezPak deployed Plug Power's full service GenKey bundle, including more than 40 Plug Power GenDrive fuel cells, replacing batteries in lift vehicles. Support for the fuel cell systems includes GenFuel outdoor hydrogen storage with two indoor GenFuel dispensers, and GenCare service for the fuel cells and hydrogen system.

FreezPak's Paterson, NJ facility, uses 9 GenDrive fuel cells, while utilizing Plug Power's GenFuel "hub and spoke" model. This innovative hydrogen distribution solution provides fuel from the Carteret facility to the Paterson facility, spreading the fueling cost across both facilities. FreezPak operators refuel the lift trucks themselves in just minutes at strategically placed GenFuel dispensers inside the warehouse. As an industry leader, FreezPak is empowered by its GenKey installation, improving productivity and output for each shift by as much as 40%, streamlining their material handling processes and improving product speed to market.

FreezPak is committed to adopting sustainable solutions that allow it to enhance operations and successfully compete with other cold storage service providers. Through the adoption of hydrogen fuel cells, FreezPak has presented itself as a pioneer in the cold storage market and has already received awards for innovation within the material handling market.

> "Our customers look to us for progressive technology," commented Michael Saoud.

WHY PLUG POWER & HYDROGEN FUEL CELLS

Productivity Enhancements Save Money.
Battery charging in the cold warehouse environment was costing FreezPak 1 hour per shift compared to two minutes for hydrogen refueling. Over one year, that 58 minutes per shift time savings represented over 590 hours of lost productivity per forklift truck in a two-shift operation. Fuel cells store enough hydrogen to complete a standard eight- to 10-hour shift.

Additionally, FreezPak was able to lower their electric bills by 31.5% after the switch to fuel cells. With hydrogen fuel cells, cold chain facilities can eliminate battery rooms, putting both space and capital dollars into business-enhancing activities.

Consistent Power Even in the Freezer.
Unlike batteries, hydrogen-powered forklift trucks operate at full power all shift long, even in the most extreme conditions as low as -22 degrees F. With batteries, FreezPak's turret truck operators were having to choose not to use their headlights and cab and backrest heaters in order to conserve battery. Imagine driving a car all day in winter without a working heater. The switch to fuel cells not only allows operators to stay productive longer, but also means lift truck operators can remain comfortable and safe in the cold storage facility for a full shift.

Clean Energy is Safe Energy.
Hydrogen fuel cells provide a clean, zero-emission power solution that boosts productivity and reduces greenhouse gases. Fuel cells contain no toxic materials and only emit heat and water as byproducts. No battery acid, no crushed fingers, no electrical shocks . Instead, warehouse operations that move smoothly with predictable speed. Fuel cells are safe for employees, clean for the community, and mean better business for customers.

> "I would never go back to batteries," said David Saoud. "The case for fuel cells in freezer warehouses is too strong."

Corporate Headquarters
968 Albany Shaker Road
Latham, NY 12110
518.738.0320

West Coast
15913 E. Euclid Ave.
Spokane, WA 99216
509.228.6500

PLUGPOWER.COM
genkey@plugpower.com

PLUG POWER®

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