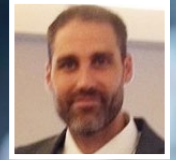


Chris Huston
Sales Specialist
Polar Leasing Company



Smart. Sustainable. Secure.

The New Era of Pharmaceutical Cold Storage

The Evolving Role of Cold Storage in Modern Pharma

Over the past five years, pharmaceutical cold storage has evolved from a supporting function into a strategic driver of reliability, compliance, and scalability. The post-pandemic period accelerated this transition as pharmaceutical companies shifted from reactive logistics to proactive readiness, designing networks that anticipate regional surges, power interruptions, and changing compliance standards.

The growth of GLP-1 therapeutics such as semaglutide and tirzepatide has triggered one of the largest expansions in the pharmaceutical cold chain to date. According to IQVIA (2024), global GLP-1 drug sales are projected to surpass \$100 billion by 2030, driving significant investment in validated storage and distribution infrastructure.

Meanwhile, online and telehealth pharmacies—including Hims, Hers, and Amazon Pharmacy—are reshaping pharmaceutical logistics. McKinsey's 2024 Digital Health Report notes a 15% year-over-year growth in U.S. online pharmacy sales, emphasizing the need for smaller, strategically placed, pre-validated storage hubs that ensure chain-of-custody integrity and fast delivery.

Today's pharmaceutical companies need cold storage that is not only dependable and compliant, but also deployable, auditable, and sustainable. Rental walk-in units are becoming the preferred solution across the life sciences supply chain due to their ability to scale rapidly and meet validation requirements.



By 2026,
AI-enabled monitoring and predictive
maintenance are expected to reduce
cold-storage downtime by up to 20%.
(Source: ISPE 2025 Outlook)

Key Industry Trends Shaping Pharmaceutical Cold Storage in 2026

1. Biologics and GLP-1 Expansion

Temperature-sensitive biologics now represent more than 50% of drugs in development (BioPhorum, 2025). GLP-1 medications, in particular, have intensified the demand for compliant, redundant cold storage throughout production and packaging.

2. Telehealth and eCommerce Distribution

The direct-to-consumer healthcare boom has decentralized pharmaceutical fulfillment. Pre-validated rental units support these distributed networks without the cost, delay, or environmental impact of permanent facilities.

3. Sustainability and Refrigerant Transition

Under the U.S. EPA's AIM Act, manufacturers must reduce hydrofluorocarbon (HFC) refrigerant use by 40% by 2028. This regulation is pushing life-science companies toward all-electric, low-GWP refrigeration systems. Polar Leasing's nationwide electric fleet helps clients meet sustainability goals while staying compliant.

4. Data Transparency and Regulatory Readiness

Automated temperature logging and 24/7 remote access are now essential for FDA 21 CFR Part 11 and global GxP compliance. Technologies such as KE2 Therm Solutions provide real-time alerts, audit-ready reports, and continuous assurance of product safety.

TOP 5 COLD CHAIN INVESTMENT PRIORITIES FOR 2026

- ✓ Expand validated storage capacity
- ✓ Integrate remote monitoring
- ✓ Prepare for refrigerant transition
- ✓ Strengthen redundancy plans
- ✓ Document energy efficiency metrics

Polar Leasing Features and Benefits

Polar Leasing continues to deliver dependable, validated, and sustainable cold storage solutions for pharmaceutical and life-science clients nationwide.



TEMPERATURE CONTROL: Rental units are equipped with advanced temperature-control systems, ensuring stable and consistent performance. Optional monitoring adds supplemental security.



VALIDATED: Each PLC unit undergoes comprehensive validation testing prior to shipment, including temperature mapping with detailed data reports.



SPACE-SAVING: Walk-in units offer more storage capacity and efficiency than reach-in models, optimizing space in high-demand environments.



FLEXIBILITY: Rental walk-in units enable adaptable responses to seasonal, regional, or project-based needs without long-term capital investment.



REGULATORY READINESS: Supports compliance with FDA 21 CFR Part 11, ICH Q1A, and GxP standards, providing auditable data and redundancy options.



SUSTAINABILITY ADVANTAGE: Polar Leasing's all-electric fleet minimizes emissions, reduces embodied carbon, and aligns with sustainability mandates.

Technology and Innovation Driving the Next Era

Polar Leasing integrates KE2 Therm Solutions monitoring technology across select walk-in units to provide precise temperature control, real-time data visibility, and automated alerts. Models such as the WL820 and DT820RP deliver validated redundancy for mission-critical pharmaceutical storage.

Remote monitoring adoption has grown by over 30% in pharmaceutical logistics since 2022 (Statista, 2025). These innovations ensure continuous visibility, faster deviation detection, and predictive maintenance capabilities to maintain optimal conditions.

Challenges and Opportunities in 2026

Rapid market growth, stricter compliance requirements, and sustainability mandates are reshaping cold storage planning across the life sciences sector.

- Capacity Crunch**
 GLP-1 production and cell/gene therapy expansion continue to outpace permanent facility construction.
- Decentralized Fulfillment**
 Telehealth and online pharmacies require validated regional micro-storage nodes.
- Refrigerant and Energy Regulations**
 The AIM Act and new energy standards are accelerating low-GWP adoption.
- Workforce and Audit Pressure**
 Remote monitoring simplifies QA oversight and mitigates staffing challenges.



Refrigerant and Energy Compliance Watch

(2025 → 2026)

The EPA's phasedown schedule under the AIM Act mandates a 40% reduction in HFC refrigerant consumption by 2028. Simultaneously, the U.S. Department of Energy is tightening efficiency standards for commercial refrigeration equipment. Polar Leasing's electric fleet provides a practical bridge during this transition, with remote monitoring that supports energy reporting and compliance documentation.

Policy and Compliance Outlook for Buyers

(2026)

The regulatory environment for life science logistics continues to evolve rapidly. Buyers should monitor these three areas:

- **Data Integrity Standards**
FDA 21 CFR Part 11 and global GxP frameworks emphasize electronic recordkeeping and traceability.
- **Environmental Legislation**
The AIM Act and state programs are introducing new refrigerant and energy-reporting requirements.
- **Healthcare Delivery Shifts**
Telehealth growth and mail-order fulfillment increase the need for decentralized, validated storage.

Conclusion

As pharmaceutical logistics evolve, adaptability, validation, and sustainability define competitive advantage. Polar Leasing leads this transformation with its pre-validated, all-electric fleet, KE2 Therm Solutions monitoring, and nationwide distribution network. Whether supporting GLP-1 production, telehealth fulfillment, or research operations, Polar Leasing delivers the reliable, compliant, and future-ready refrigeration infrastructure that modern life sciences demand.



ABOUT POLAR LEASING COMPANY

In early 2002, Polar Leasing Company, Inc., was created by Polar King to accommodate the growing demand for walk-in refrigeration rentals. It has expanded its walk-in rental fleet to cover most of the United States and other parts of North America, offering both short- and long-term rentals to industries of all types. Within the last five years, we began the process of building a specific division dedicated to the Life Science Supply Chain. Polar Leasing offers the largest all-electric fleet of temporary refrigeration, with more than 80 distribution depots and a 24/7 service hotline.

For more information, visit polarleasing.com or contact Polar Leasing, 4410 New Haven Ave, Fort Wayne, IN 46803 USA. In an emergency, call (877) 674-1348 or write rentals@polarleasing.com.

