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LEADOFF

MESSAGES FROM GCCA LEADERS

WELCOME TO THE NEW YEAR, AND OUR FIRST EDITION OF COLD FACTS IN 2025! THIS TIME OF YEAR IS FILLED WITH REFLECTION, BOTH PROFESSIONAL AND personal, as we all look back on last year's progress, accomplishments and missed opportunities. As well as develop goals, resolutions, and aspirations for the new year.

I look forward to working with you, across warehousing, transportation and logistics, construction and through our Foundation's efforts in education, research, and development, to build and lead a resilient cold chain.

As I mentioned a time of year for reflection and planning, we just wrapped up our own full staff strategy planning session together here in our global headquarters, where we spent the week discussing the Alliance, our past accomplishments and moments of excellence, our strengths and opportunities for the future, and areas for improvement and growth. With a skilled, dedicated and passionate GCCA staff across the globe, we are poised for continued success. As we kick off the new year, we remain committed to driving member value, expanding our advocacy work, elevating communications and promotion of our critical industry, and securing our global voice in the cold chain.

As you will read and hear, 2025 is a year of strategic reset for GCCA as we work with each of the core entities of the Alliance [GCCA Warehouse, GCCA Transportation, Global Cold Chain Foundation, and the Controlled Environment Builders Association (CEBA)] to define both our overarching and shared vision, as well as our individual five-year plans. I am grateful in advance to our Board members and especially the new Executive Committees who will lead this process and help us to ensure GCCA refreshes and focuses its mission and action plan to deliver for our industry for not just the next five years, but the next 20.

The start of a new year is always filled with excitement at GCCA because it means the kickoff of our Institute program, starting first with our North America Cold Chain Institutes. It's energizing to start our year with learning and growth at our Cold Chain Institute classes in Atlanta, Georgia and Tempe, Arizona. We are proud of our unique program, where emerging cold chain leaders meet, share, and learn from business leaders and industry experts. This year is especially exciting, as we are celebrating the 60th anniversary of this program here in the United States, and we can also proudly point to the expansion of this program into four other countries.

Bringing cold chain professionals together is at the core of our purpose, and our delivery of cold chain knowledge and education continues beyond our Institutes with Conferences and Conventions planned on six continents this year. We have also expanded our Cold Chain Connections and virtual events program, which complement our conferences by providing different ways for cold chain businesses to access the resources and opportunities that GCCA has to offer.

We are entering a significant year of political change and elections around the world. GCCA is dedicated to advocating where it can make a difference. Our unique global presence and proactive global strategy will unite people in our industry to influence policy where it is most needed. In this, as in many other association directives, member engagement is critical.

We couldn't do what we do without the volunteers that take up positions on our global Boards, our regional councils and our committees. We look forward to working with you in 2025 to continue our progress. We thank the outgoing Chairs, Jason Dreisbach, GCCA Warehouse; Don Durm, GCCA Transportation; and Mickey Hoffmann, GCCF. They have each played an instrumental role in guiding us through 2024, and I welcome our new Chairmen, Tim Ludwig, Richard Patenaude, and Ken Whah, as well as Sam Tippmann, continuing in his second year as CEBA Chair; and I look forward to working with them to deliver on their priorities as well as drive our strategic work forward

The year ahead is another vital one for our industry, and as your Association, we look forward to supporting your business every step of the way.

SARA STICKLER
GCCA PRESIDENT
AND CEO

COLDFACTS

COLD FACTS magazine is published every other month by the **Global Cold Chain Alliance (GCCA)**, an organization that unites partners to be innovative leaders in the temperature-controlled warehousing, transportation and logistics industry.

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PANELS THAT CONNECT

GCCA PETITION APPROVED TO CHANGE IMPORT HOUSE POLICY

Reinspection applications from facilities more than 50 miles from port of entry no longer arbitrarily dismissed.

By Lowell Randel

GCCA, along with the Meat Import Council of America (MICA), submitted a petition in July 2023 to the U.S. Department of Agriculture's (USDA) Food Safety Inspection Service (FSIS) asking the agency to change the current interpretation of the "50-mile" rule for grants of inspection for import establishments (I-Houses).

The "50-mile" rule, was an internal FSIS policy originally adopted because of security and food defense concerns related to tracking imported meat, poultry and egg products. However, the arbitrary policy has become outdated and unnecessarily creates inefficiencies in the supply chain. Changing the restrictive policy was identified as a priority by the GCCA Government Affairs Committee, prompting the partnership with MICA to submit the petition.

All meat and meat product imports into the United States, regardless of country of origin, must be presented for reinspection by FSIS upon arrival at a U.S. port of entry. "I-House" designation means a cold storage warehouse has been permitted to serve as a holding area for import reinspection by FSIS. "I-House" status is granted by FSIS and comes with several requirements around the separation of products and making available space and equipment to conduct inspections.

FSIS import inspectors located at these facilities check documents, certification, labels and examine each shipment for general condition and wholesomeness. Reinspection of imported products is an integral component of the overall U.S. meat and poultry food safety system.

Products that pass reinspection are stamped with the USDA mark of inspection and are allowed to enter U.S. commerce for distribution and use as if they were produced domestically. If imported meat or poultry products do not meet U.S. requirements, they are stamped "U.S. Refused Entry" and must be exported, destroyed or converted to animal food (if eligible and with the approval of the U.S. Food and Drug Administration) within 45 days.

GCCA and MICA set out in the petition multiple reasons and mitigations for why the "50-mile" rule is arbitrary and unnecessary. The policy is decades old, and significant changes have occurred in the supply chain over the last several decades that allow thorough and real-time tracking of shipments, alleviating many of the concerns that were in place when the policy was originally adopted. Further, shipping and transportation trends are moving towards increased utilization of inland ports of entry, and inspection policies should follow those broader trends.

In its response to the GCCA/MICA petition, FSIS agreed that security and food defense concerns related to tracking imported meat, poultry and egg products have been addressed by advances in international trade data systems (e.g., U.S. Customs and Border Protection's Automated Commercial Environment), the implementation of the Public Health Information System electronic import component, import prior notification requirements, and the Agency's ability to track import shipments when they arrive in the U.S. Because FSIS can effectively track imported meat, poultry, and egg products, FSIS has the ability to safely conduct import reinspection at inland locations and ensure that all shipments

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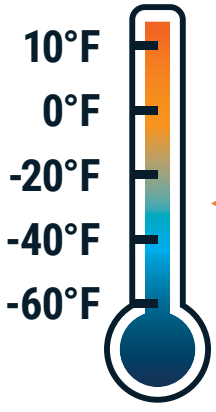

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are reinspected before they enter commerce.

Going forward, instead of arbitrarily dismissing applications from facilities more than 50 miles from a port of entry, FSIS will consider factors such as:

1. Availability of inspection program personnel to staff the establishment
2. Expected volume of product
3. Hours the establishment would be operating

FSIS will assess these factors to help ensure that potential official import inspection establishments have a consistent work schedule that would provide for the efficient and effective use of FSIS import inspection personnel.

GCCA appreciates its partnership with MICA and applauds FSIS for making this policy change. It will provide more flexibility to supply chains, reduce congestion and bottlenecks at U.S. ports of entry, increase available inspection and cold storage capacity, and provide other benefits to the increasingly overloaded import inspection system, all while protecting the safety and security of imported product.

LOWELL RANDEL is Senior Vice President, Government and Legal Affairs at GCCA.

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By Alexandra Walsh

FIGHTING UNPREDICTABLE POWER WITH MICROGRIDS

Integrated energy systems are tailored to the individual needs of cold storage facilities.

From South Africa to Central California, energy-intensive cold storage new builds, expansions and renovations face challenges from long utility interconnection delays. Even after they are connected to the grid, cold storage facilities are vulnerable to blackouts. Increasingly frequent extreme weather events, political policies, rising energy costs or crumbling infrastructure are just some of the unpredictable power challenges that can result in food spoilage and create a public health threat.

Origo Cold Storage's off-grid microgrid system generates enough solar photovoltaic cells to provide for all of the facility's energy needs. (Photo courtesy of Scale Microgrids.)

What Are Microgrids

Microgrids are emerging as versatile, on-site, cost-effective systems tailored to meet the needs of individual cold storage facility end users. These integrated energy systems can address the challenge of long interconnection queues, which are a significant barrier in agricultural regions like California's Central Valley in the United States.

Long wait times for utility service interconnection or upgrades can lead to operation delays. Many utilities are struggling with long queues for the interconnection of new facilities or site capacity expansions for existing facilities. Microgrids can be developed and begin powering facilities in under 12 months.

Microgrids enhance resilience by integrating multiple layers of energy assets, typically including on-site solar and battery storage, dispatchable generation for backup and advanced controls to ensure critical operations always stay online. Off-grid microgrids may include additional measures to allow for incorporation of emergency generators as a failsafe.

A microgrid typically incorporates on-site solar power generation that provides significant cost savings compared to utility tariffs. In addition to saving on electricity costs today, microgrids lock in energy costs by minimizing or eliminating exposure to future utility rate increases.

Grid-connected microgrids offer additional opportunities for cost savings. The use of battery storage and optimized microgrid controls allow for load shifting to hours of the day when electricity is cheapest as well as peak energy management to avoid excess demand charges. Beyond these savings, grid-connected microgrids can potentially generate revenues through participation in utility demand response programs and virtual power plants.

In addition to saving on energy costs, the low-cost on-site solar generation included in most microgrid configurations can deliver emissions benefits that are increasingly valued by cold storage facilities and their customers. Microgrids can often deliver reductions in greenhouse gas emissions of 30% or more compared to relying exclusively on the utility grid. By utilizing zero-emission solar energy to meet a significant portion of energy demand, microgrids directly reduce a facility's carbon footprint.

Microgrids provide a flexible platform for additional energy upgrades down the road, allowing businesses to future-proof their plans in case utility delays persist over the long term.

Origo Cold Storage in Central California provides a case study of microgrid applications in a cold storage facility.

Microgrid Case Study

Origo Cold Storage is using a microgrid.

Amond World is the operating partner for Origo Cold Storage, a commercial property developer building a state-of-the-art, 500,000 square-foot refrigerated cold storage facility in the Madera Airport Industrial Park in California's Central Valley.

Faced with grid interconnection delays increasing unreliability and cost concerns, Origo decided to power its facility with an off-grid microgrid designed and built by Scale Microgrids.

The Problem: Central California Is Nuts

Central California is a national and global agricultural powerhouse, with revenues from agriculture reaching $51 billion in 2021. The state is renowned for its nut production and particularly almonds, with 7,600 farms producing more than 2.9 billion pounds of almonds annually to supply approximately 80% of global demand.

This highly productive sector of California's economy also faces a major challenge. Nut crops have a short harvesting window, typically between August and October. Yet this seasonal supply must fulfill year-round global demand. It puts pressure on farmers and processors to quickly sell their crops, often at reduced post-harvest prices, which contributes to annual revenue volatility.

Cold storage facilities are a solution, however, limited cold storage capacity is difficult to secure for many small and medium-sized farms in particular. Today, 1.3 billion pounds of California almonds are stored outdoors despite vulnerability to spoilage, insects, fungus and mold.

The need for more cold storage capacity for the Central Valley's farmers is clear, but utility interconnection for facilities in rural areas is a persistent and growing problem. The refrigeration requirements of these facilities lead to long wait times and high costs to connect to the utility grid. For example, PG&E, the region's electric utility, would be unable to get power to Origo Cold Storage for two to three years.

Bypassing Interconnection

Instead of waiting in PG&E's queue, Origo "skipped the line" with an off-grid microgrid system to supply its entire energy needs. Origo's need for energy independence required an off-grid microgrid featuring 2,400 kW of solar, 2,400 kW and 4,800 kWh of battery storage, and two 1,200 kW low-emission dispatchable generators.

The first phase of the microgrid was designed and built in less than 18 months, allowing the cold storage facility to start its operations months sooner than originally anticipated – a major boon to the area's farmers.

In addition to saving time, the off-grid microgrid gave Origo Cold Storage the flexibility to be located at the "first mile," close to where crops are grown and harvested. This enables local farmers to store their crops as quickly as possible after harvest, which helps retain their quality and water content. This is crucial for a crop that can lose 10 to 15% of its water weight in the first 30 days without proper storage. Since nuts are sold by weight, this is directly tied to revenue losses for nut producers.

Origo Cold Storage is a contrast to most cold storage facilities today, which are located close to urban areas where it's easier to connect to the grid. The trade-off is that these more urban facilities are located far from rural agricultural regions.

Saving Energy and Money

Microgrids offer substantial energy savings for cold storage facilities, where refrigeration-related operations can account for more than 75% of total energy costs. Cold storage facilities require nearly 25 kilowatt-hours (kWh) of electricity per square foot and face rapidly rising electricity prices, with increases of almost 45% in recent years in some regions.

Origo's microgrid provides electricity cost savings that range from 10% to 30% compared

GCCA Working for Government Action on Load Shedding in South Africa

After severe blackouts in South Africa in 2023 exposed a critical vulnerability in the country's cold chain infrastructure, the GCCA commissioned a report on the effects of frequent power outages during load shedding (planned power outages to prevent system-wide failure).

The report shows that the resilience of the cold chain is threatened by energy challenges such as load shedding and an overreliance on ageing coal-fired power plants, particularly in Botswana, Madagascar, Mauritius, Morocco, Namibia, Senegal, South Africa, Zambia and Zimbabwe. Frequent power outages during load-shedding strain refrigeration equipment, leading to increased maintenance and breakdowns in cold chain operations.

For the Southern African cold chain to survive such shocks, the report contends the cold chain sector must urgently implement robust resilience mechanisms. Whether through backup power solutions, improved storage facilities or adaptive operational practices, fortifying South Africa's cold chain against load shedding is not just essential but urgent for food security and public health. The report suggests these issues necessitate significant investment in alternative energy sources to ensure a more sustainable and reliable power supply.

GCCA Africa Director Paul Matthew says, "An effective cold chain is the foundation of a safe, affordable and resilient food supply chain for Africa, maximizing the availability and shelf-life of food and substantially reducing post-harvest loss and waste. Our industry is also vital to economic growth and trade across the continent. Reliable access to energy is a core requirement for keeping food refrigerated in storage and in transportation, and our new report shows the impacts on the cold chain over the past two years of the worsening energy crisis and increase in load-shedding.

"GCCA is actively engaged with government and power companies to discuss its policy recommendations."

The line of white rectangular boxes to the left of the generators is a 4.8 MWh battery energy storage system. (Photo courtesy of Scale Microgrids.)

to a grid-connected cold storage facility, with savings increasing at higher loads.

These energy savings are achieved by leveraging low-cost on-site solar generation with advanced controls, which optimizes the charging and discharging of the site's battery system to minimize runtime for the more expensive dispatchable generators.

The facility also drives cost savings with predictive energy management systems that can analyze and anticipate fluctuations in the region's weather, adjusting the facility's energy use accordingly. For example, the software can temporarily idle the system without compromising temperature control because of the building envelope's ability to insulate and retain coolness.

Layers of Resilience

Grid reliability challenges can be particularly acute in rural and agricultural regions like California's Central Valley, where distribution infrastructure is often older and less robust than in urban areas. This is particularly problematic for cold storage facilities' high energy demand requirements and need to maintain 100% uptime for refrigeration and humidity control systems.

All of Origo's electricity is supplied by its off-grid microgrid, allowing it to be completely independent from the grid and resilient to disruptions. The cold storage facility's microgrid incorporates three levels of redundancy.

1. **Rooftop solar array and battery storage.** 2,400 kilowatts (kW) of solar arrays take advantage of Central California's abundant sunlight, while 2,400 kW/4,800 kilowatt-hour (kWh) of battery storage allows this energy to be stored for later use. With an expected load of 200-250 kW, the solar and battery will be able to power the facility for 12 to 18 hours a day, allowing it to be powered primarily by renewable energy the majority of the year. Even in winter, the facility can run largely on the combination of solar and batteries. The low outdoor temperature combined with the thermodynamically efficient insulation in the building's envelope allows for reduced energy requirements to maintain optimal temperature and humidity in the winter.
2. **Low-emission dispatchable generators.** Four 1,200 kW low-emission dispatchable generators are installed for use when solar

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The two 4.8 MW low-emission generators. (Photo courtesy of Scale Microgrids.)

and storage are insufficient to meet the facility's needs. The San Joaquin Valley Air Pollution Control District has granted permits for these generators, ensuring that their emissions are under required limits. The generators provide enough electricity to power the entire facility when needed. In normal circumstances, the generators alternate every few hours to allow for maintenance. If there is a sudden spike in the electricity demand, they're designed to be able to run simultaneously.

3. **Exterior plug for temporary generators.** In the unlikely case that all of these on-site systems fail, the facility is equipped to allow an external generator to be brought from off-site to be plugged into the switchgear, enabling the facility to maintain an uninterrupted power supply.

Sustainable Solar

The ability to power most of the facility's needs from solar energy delivers significant emission reductions, and the highly efficient dispatchable generators ensure that emissions are minimized. As a result, Origo's CO2 emissions are about 40% lower than a typical grid-connected cold storage facility.

Future Growth

Origo Cold Storage's microgrid system is designed to produce more power than the facility needs, giving it flexibility for future facility expansions or the adoption of new technologies. For example, the infrastructure could be optimized to charge electric trucks while they load, unload and wait at the facility.

Because the microgrid systems are modular, they can be rapidly expanded to match a facility's growing operational requirements. And, if Central California's distribution grid capacity is expanded in the future, Origo's microgrid can be interconnected with the utility grid to further optimize energy costs and resilience.

Predictable Outcomes

Avoiding the delays of grid interconnection ensured a faster, more predictable start to Origo Cold Storage's operations.

The facility's proximity to agricultural areas offers additional advantages for farmers, including enhanced crop quality and reduced losses during transportation.

Its microgrid, equipped with solar panels, battery storage and low-emission generators, delivers a robust and sustainable energy solution with three levels of redundancy to guarantee continuous power supply.

ALEXANDRA WALSH is a Senior Publishing Consultant with Association Vision and Editor-in-Chief of COLD FACTS.

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STELLAR AND MAPLE REINDERS WIN 2024 BUILT BY THE BEST AWARDS

Top cold storage design-build competition recognizes two best-in-industry projects.

By Keith Loria

Stellar Elevates Cold Storage Capabilities With Americold Expansion

Americold recognized the growing need for enhanced capacity to support the production and supply chain of a leading branded food company in its facility in Russellville, Arkansas, United States.

Stellar was hired for this significant undertaking.

"We have wanted to work with Americold for a while," says Nathan Kendall, Project Manager at Stellar. "We had submitted a proposal for some projects and based off our interviews and presentations for those projects, they gave us a shot at the Russellville job, and it was more complex than the other two."

Stretching more than 140 feet tall and covering 136,000 square feet, the project encompasses a state-of-the-art ammonia refrigeration system, insulated metal panel (IMP) exterior walls, an automated truck unloading system and an advanced automated storage and retrieval system (ASRS) with gantry and loop connections linking the warehouse to the loading docks.

The project started just prior to the COVID-19 pandemic outbreak in 2020, which introduced unprecedented challenges, necessitating extensive communication, coordination and collaboration among all project stakeholders, notes Kendall. Despite these hurdles, the project was successfully completed on time and within budget in February 2023, culminating in its opening in March 2024.

The Americold Russellville facility expansion, designed and built by Stellar, is more than 140 feet tall and covers 136,000 square feet. (Photo courtesy of Stellar.)

Complexities in Execution

Kendall says the Americold Russellville expansion was characterized by its complexity and the requirement for advanced solutions. The specifics demanded not only cutting-edge technology but also meticulous planning to handle various operational needs.

Initially, the project faced challenges in procuring additional land to accommodate the expansion, and the existing site's limitations prompted further complications in zoning and permitting. "Early on, Americold purchased two plots of land to the west of the property in order to expand the footprint," Kendall says.

Stellar's effective coordination with the City of Russellville, coupled with adherence to regulatory requirements, was instrumental in keeping the project on schedule despite these complications.

The project also had to navigate a series of strict regulatory and safety standards due to the use of ammonia refrigeration, the intricate fire protection system and the height of the structure. The scheduling of the installation of the racking and fire protection systems was particularly challenging, requiring effective communication to prevent delays.

"A building like this is somewhat foreign to a lot of municipalities," Kendall says.

Left:The system allows for seamless movement of products from the loading docks into high-density storage. (Photo courtesy of Stellar.) Right: The scheduling of the installation of the racking and fire protections systems was challenging and required great communication to prevent delays. (Photo courtesy of Stellar.)

"When you have a 144-foot building with complex technology and fire protection, it meant a lot of time reviewing the plans with city officials and getting them acquainted with this newer technology."

As a result, cross-disciplinary collaboration among structural engineering, process design, automation and fire protection teams was essential to achieving the desired outcome.

The facility's architecture was engineered to accommodate precise temperature control requirements through its high-performance ammonia refrigeration system – a critical component for preserving temperature-sensitive products.

In response to rising material costs and supply chain disruptions brought on by the pandemic, the project team implemented strategic procurement and scheduling practices designed to counteract these economic challenges, explains Kendall. "Materials were ordered well in advance, and a phased construction approach was employed to align progress with material availability, thus ensuring that the project remained on course and budget."

Notable Achievements

Building Information Modeling (BIM) was integral to the project's success, and facilitated precise coordination among diverse trades, including structural, mechanical, electrical and automation teams. Kendall says the advanced software enabled the identification and resolution of potential conflicts early in the design phase, subsequently reducing rework and ensuring a smoother construction timeline.

One of Americold Russellville's most notable features is its fully automated truck unloading system. This innovation is designed to streamline logistics operations, automating the flow of goods from trucks to storage and significantly reducing time and labor costs.

"The system's integration with the automated storage and retrieval system (ASRS) allows for seamless movement of products from the loading docks into high-density storage, maximizing efficiency and addressing current labor shortages," Kendall says.

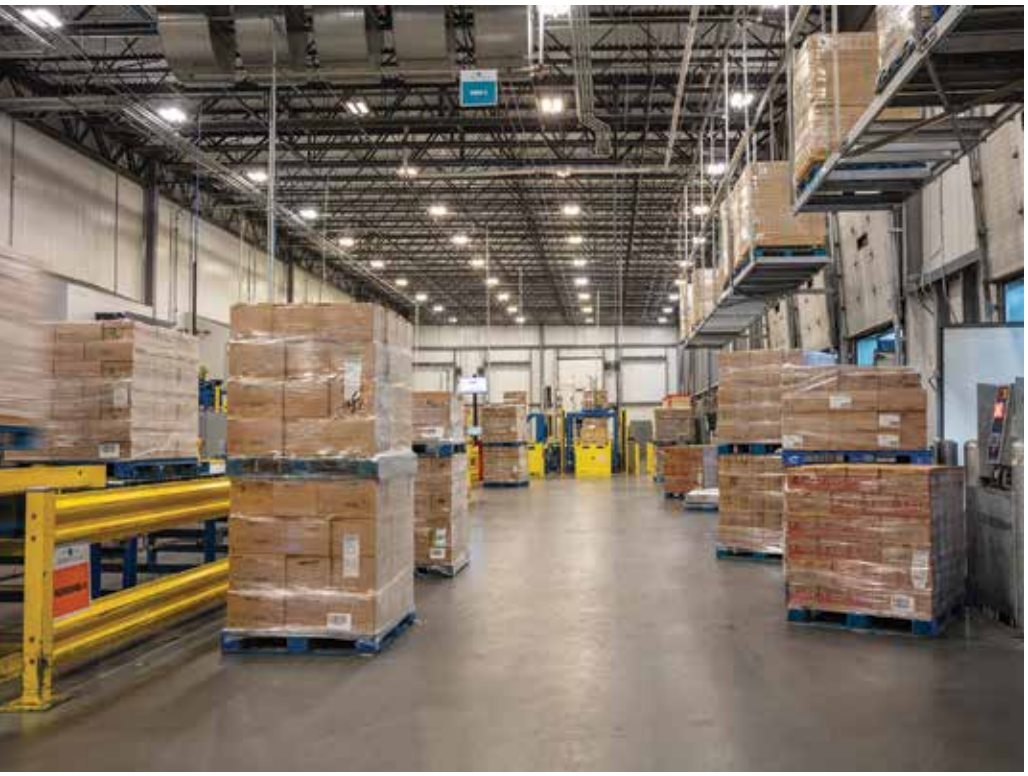
Another significant innovation was the application of the IMPs used for the facility's exterior walls. Kendall notes these panels were chosen for their exceptional thermal performance and energy efficiency, and played a paramount role in maintaining strict temperature controls necessary for cold storage operations. Additionally, Stellar's thermal team utilized a swing stage to install these panels.

Strong Partnership

The Stellar-Americold partnership played a crucial role in the successful execution of the ASRS expansion project, Kendall explains. "Stellar adopted a project management approach characterized by integration, adaptability and an unwavering commitment to surpassing expectations," he says. "Customized solutions were devised to meet project goals effectively, including the development of an integrated schedule that encompassed all subcontractors. This enabled the team to monitor timelines and resources with precision."

Utilizing advanced tools like Procore, Autodesk software and Microsoft Project facilitated real-time updates and

A significant innovation on the build was the application of IMPs for the facility's exterior walls. (Photo courtesy of Stellar.)



An automated truck loading system and an advanced ASRS with gantry and loop connections link the warehouse to the loading docks. (Photo courtesy of Stellar.)

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- Evapco
- Fastener Systems Inc.
- Frazier Industrial Company
- Innovative Refrigeration Systems
- Jamison Doors
- Metl-Span IMP
- Protectowire
- Rytec doors
- Swisslog
- Twintec USA

communication among all stakeholders, ensuring alignment and clarity at every stage. The project team worked diligently to keep all parties informed about critical developments, thus ensuring a well-coordinated effort even amid public health and supply chain challenges, notes Kendall.

"A commitment to high levels of coordination was essential throughout the project's duration, preventing operational disruptions and allowing the existing Americold facility to operate fully during construction," Kendall says. "The team was probably the biggest success on this job."

Sustainable Mindset

Stellar's design team prioritized energy efficiency in the Americold Russellville expansion, optimizing the facility by incorporating sustainable building materials.

Kendall says the choice of Metl-Span's IMPs, recognized for their energy efficiency, recyclability and long-term durability, reflects an unwavering commitment to reducing environmental impact. "The thermal performance of these panels translates to remarkable energy savings, maintaining the delicate balance between temperature control and sustainability," he says.

In the realm of energy-efficient lighting, all 17 installed types within the Americold facility are LED fixtures. These lights outperform traditional incandescent options by approximately 80% while extending longevity, even in the extreme conditions of the -10° ASRS area. By integrating energy-efficient lighting, the project succeeded in achieving a reduction in energy use by approximately 18% compared to baseline models.

Additionally, low-flow toilets and faucets were standard installs to diminish water consumption within the facility. Smart modeling anticipated a 25% reduction from previous usage levels, which Kendall points out supports Americold's commitment to improving water conservation without the need for extensive outdoor irrigation systems.

A Job Well Done

The Americold Russellville project holds broader-reaching implications beyond its immediate operations.

The project's expansion addresses critical gaps in cold chain infrastructure, enhancing the overall reliability of temperature-controlled logistics. Kendall says such initiatives enable the redistribution of perishable goods to underserved regions, thereby improving public health standards and food security.

"Everyone worked as a team and felt accountable, and we finished a quality building, on-time and under budget, which is what our goal always is," Kendall says. "Personally, I'm proud of what we all learned from this project, and it helped set the stage for our next project with Americold."

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Maple Reinders Selected to Build Flagship Canadian Distribution Center

Dot Foods Inc., one of the largest food redistributors in North America, selected Maple Reinders to design-build its flagship Canadian head office and distribution center.

"Maple was already known to Dot Foods through our reputation in the design-build industry, and they reached out to us for support in the due diligence and site planning stage," says Joseph Sabourin, Project Director at Maple Reinders based in Ontario, Canada. "Honestly, the pitch was just one of partnership, transparency and the alignment of shared values. Dot was new to Canada, and despite our reputation and references, we were still unknown to them. With this in mind, we offered to provide the initial services as a way for us to prove our value to the client."

Once the due diligence and site planning was complete, Maple Reinders gained the company's trust and confidence, and Dot Foods selected Maple to continue acting as its designer-builder for the full project.

Located in Ingersoll, Ontario, the build was an important milestone facility meant to demonstrate a long-term commitment to the Canadian market. In fact, the building would be just phase one of a four-building complex.

Both sides came together and developed a mutually agreeable strategy that placed the project needs at the forefront.

"Ingersoll has been a great town to work with, so we had confidence we could achieve the early project goals," Sabourin says. "Moving then into design and construction, it is important to remember that parts of this project took place during the peak of market volatility. It was critical to ensure we managed project costs and schedule, specifically material lead times, to ensure the project met their operational and commercial goals."

The project spanned a two-year period starting in 2021, with approximately eight months spent in planning, design and approvals.

"Construction was originally slated to be completed in the summer of 2023, but freezer demand was much higher than Dot Foods originally expected and it opted to add an additional 65,000 square feet during the original scope's construction," Sabourin said. "Early on, Maple recommended that Dot Foods develop the entire master plan for municipal approval. This ended up being instrumental to the expansion because we didn't have to go through any additional approvals process."

The project included 10,000 square feet of office space. (Photo courtesy of Maple Reinders.)

Maple Reinders was able to get permit drawings developed, approved and completed in September 2023.

"The adaptability and efficiency of our team in accomplishing this project is something that I am extremely proud of," Sabourin says.

Project Highlights

The facility features 85,000 square feet of freezer space maintained at -18°C to -30°C, a 30,000-square-foot cooler/cold dock operating between 10°C and 3°C, a 45,000-square-foot ambient storage and distribution production area and 10,000 square feet of office space.

"With any cold storage build, we always pay special attention to the envelope, the equipment and the slab," Sabourin says. "For this project, Dot Foods decided to implement its first CO2 refrigeration system. It continues to provide significant electrical efficiencies and the carbon credits surely don't hurt."

In the refrigerated and ambient storage sections, the facility features a joint-free concrete slab designed with sustainable additives, reducing the concrete material required for optimal density. This design not only enhances sustainability but also contributes to lower long-term maintenance costs and promotes a cleaner, more hygienic environment for food-grade applications.

Sustainable Measures

In Ontario, the building code mandates a number of sustainable practices related to waste reduction, durability and air quality among others.

"Not considering mandated elements, I'd say that the joint free slab and the CO2 refrigeration system are the main standouts," Sabourin says. "The PrimX joint free slab is fiber reinforced and requires much less concrete thickness to achieve the same load bearing strength as a traditional slab. Basically, this means less materials required and less transportation of those materials to site."

Additionally, the CO2 system is a high-

Maple Reinders was selected to design-build Dot Foods' flagship Canadian head office and distribution center. (Photo courtesy of Maple Reinders.)

efficiency system with increased potential for heat reclaim. This lowers operational expenses and energy demands.

"We followed up with Dot Foods recently to get the details on how much more energy efficient this system is for them, and I can say confidently that the numbers look great, and this is not even including the carbon tax credits in play," Sabourin says.

Overcoming Challenges

Working through a very harsh winter in the heart of Ontario's snow belt is tough for any project, and roofing and panel installation was undertaken during the severe winter months. However, this was just the tip of the iceberg of challenges that faced Maple Reinders.

"The biggest hurdle was probably the market uncertainty at the time," Sabourin says. "A lot of jobs were competing for resources during and after the pandemic. With only so much production to go around, we were at the mercy of our suppliers and the local and global supply chains."

Sabourin says Maple Reinders' strategy was to purchase with a just-in-time approach, but occasionally it was not possible to do this with confidence. "In some cases, we stocked material onsite or nearby so that we could secure pricing and materials without putting schedule or cost at risk," he says. "Dot Foods definitely kept us accountable, but they were more than fair and flexible."

A Collaborative Approach

The project was driven by mutual trust, collaboration and respect through the entire process, Sabourin says.

"No project is without its challenges, but every single person on Maple's end and with Dot Foods kept focus entirely on the success of the project," Sabourin says. "Adding to this was the town of Ingersoll, that really pushed to get things moving and made life easy throughout the planning and development process. It really felt like a true partnership with all sides moving in conjunction with one another."

Sabourin also pays credit to the work and support of Maple Reinders' office

The build features a 30,000 square foot cooler/cold dock with levelers. (Photo courtesy of Maple Reinders.)

team, support and field teams, as well as the subcontractor, engineering and supply partners that were all instrumental in ensuring the success of the finished project.

"To be recognized by CEBA with this Built By The Best award is an absolute privilege, but it would not be remotely possible without the contributions of the hundreds of people who all own their part in this achievement," says Sabourin.

With the facility completed, it's expected to add 130 jobs over the next three years, encompassing a range of positions such as maintenance technicians, engineers, office and sales staff, transportation and warehouse workers, as well as food inspection and quality assurance professionals. Sabourin notes that contributes not only to the local economy but also strengthens the workforce within the cold chain sector.

KEITH LORIA is an award-winning journalist who has been writing for major newspapers and magazines for close to 20 years, on topics as diverse as sports, business and technology.

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2024 BUILT BY THE BEST AWARD WINNING SUPPLIERS

These CEBA member companies were integral to the success of Maple Reinders' winning project:

- Belmont Concrete Finishing Co. Ltd.
- GAF
- Global Insulated Doors Inc.
- M&M Carnot
- Metl-Span
- Rite Hite

A pallet wrapper with roll-up door in the background at Dot Foods' new distribution center. (Photo courtesy of Maple Reinders.)

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SURGING DEMAND FOR COLD STORAGE IN POLAND

After three years of conflict on its doorstep, the country's cold chain is thriving.

By Alexandra Walsh

In the spring of 2022, the Russian invasion of Ukraine was rattling global supply chains, putting pressure on cargo capacity and raising concerns about further supply chain disruptions. Cold Facts interviewed regional operators about the impact of the Ukraine conflict including Polish logistics operator Kris Verbruggen, CEO and Managing Director of Frigo Logistics. At the time, he reported that the effect of war on operating costs was very extensive, but customers were accepting the underlying reality and generally accepting increased prices as well.

The company also temporarily closed its office in Moscow and halted activities.

Fast forward to the winter of 2025, and although the conflict continues, Verbruggen says currently there is no business disruption. "The Polish market stabilized in the new reality," he says. "Some Ukrainian capital has also entered the Polish market to set up investments as a way to spread risk."

Verbruggen notes there is much more trade now between Ukraine and Poland than at the beginning of the war. "However, as Ukraine is not part of the EU, that traffic is not very fluid, and there are still long waiting times in both directions at the border control points."

While Verbruggen says sanctions against Russia have no impact on business or operations, they decided to close their branch office in Moscow. "Initially we put the development on hold, but then it was decided to close the office completely at the end of 2022."

The conflict in Ukraine and sanctions against Russia have not directly impacted inventory levels and capacity. "Generally, companies have increased their buffer stocks over the last years," Verbruggen says. "It was not only the war in Ukraine but also the pandemic, access to the Suez Canal and geopolitics in general."

Regional Cold Chain

Poland, the second largest country in Central Europe, is one of the leading agri-food producers and one of Europe's largest producers. Food exports play an important

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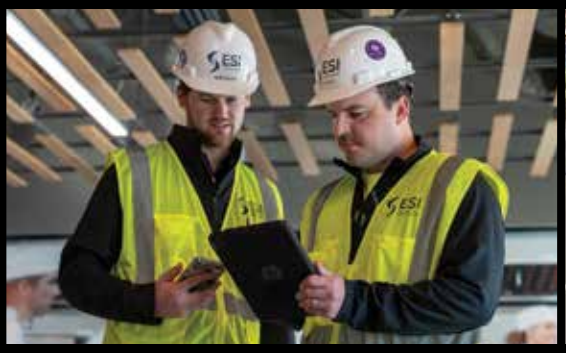

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Demand for Polish Poultry*

Since the start of 2024, Poland has experienced a notable uptick in poultry meat production. Data from the Polish Statistical Office indicates that between January and May 2024, domestic poultry meat output surpassed 1.4 million tons, a 5.4% rise from the same timeframe in 2023. This surge in domestic poultry production can be largely attributed to falling feed prices, which bolstered production profitability.

Furthermore, robust export demand, heightened domestic consumption, and poultry's competitive pricing relative to pork spurred producers to ramp up their output. Given the market dynamics and the enhanced profitability of poultry farming, a steady uptick in Polish poultry production was anticipated for the remainder of 2024.

Concurrently, export demand was invigorated by competitive pricing in the EU market and newfound opportunities in non-EU markets, especially after Poland's avian influenza-free status was reinstated in April 2024.

This combination of factors exerted upward pressure on broiler chicken procurement prices. While there was an upward trend in prices, they remained below the levels of 2023. Nonetheless, thanks to reduced feed prices, the profitability of chicken production outpaced that of 2023.

*Source: *https://www.mordorintelligence.com/industry-reports/poland-cold-chain-logistics*

role in Poland's multibillion-dollar economy.

The two major transport corridors connecting Poland to Northern Europe and Central Asia make it a regional food hub, extending beyond the European Union's borders to the Mediterranean, North Africa and Asia. The country's favorable location makes it fully accessible to the well-served road, air and rail links.

The cold chain logistics market in Poland is highly fragmented with a mixture of international and domestic players. As the demand for temperature-sensitive logistics solutions grows, particularly in the food and pharmaceutical sectors, the industry is poised for significant expansion.

With an annual investment of around $2 billion in new warehouses, storage capacity is set to increase significantly in the coming years. In addition, several factors are increasing the demand for transportation solutions in Poland, such as food, nuclear power plants, and temperature-sensitive machinery and equipment.

To meet the rising demand for cold chain logistics, companies are bolstering their warehousing and transportation capabilities. In September 2024, NewCold Logistics expanded and doubled its capacity at its automated warehouse in Kutno, Poland. "We are excited to further contribute to Poland's status as a major European food logistics hub with this strategic expansion," says Bram Hage, NewCold's Founder and CEO. "The additional capacity at Kutno allows us to meet the growing demand from our customers in Poland."

Just one example of the surging demand for cold storage across Poland.

Market Overview and Forecast

The cold chain logistics market in Poland is mainly driven by the surge in demand for fast moving consumer goods, a surge in trade activities and expanding warehouse and storage capabilities. As trading activities rise, so does the demand for cold chain logistics in the market.

In 2023, Poland achieved a record milestone, exporting agri-food products worth $54.83 billion, an 8.1% increase from the previous year, as reported by the Polish National Support Center for Agriculture.

In 2023, the European Union (EU) emerged as Poland's primary trading partner, accounting for 73% of its agri-food exports, valued at $40.23 billion (7% year-on-year increase). Germany stood out as the largest recipient of Polish agri-food exports, importing goods valued at $14.08 billion (11% increase).

Other significant importers of Polish food include:

- The Netherlands ($3.39 billion/2% increase)
- France ($3.18 billion/4% increase)
- Italy ($2.81 billion/7% increase)
- Czech Republic ($2.54 billion/9% increase)

Beyond the EU, key recipients of Polish food products include:

- United Kingdom ($4.45 billion/14% increase)
- Ukraine ($1.09 billion/9% increase)
- United States ($920.96 million/13% increase)

Leading Polish exports to the EU are:

- Poultry meat ($3.28 billion)
- Dairy products ($2.33 billion)
- Bread and bakery items ($2.22 billion)
- Beef ($1.91 billion)
- Pet food ($1.80 billion)

GCCA Cold Connection Poland

GCCA members met in Warsaw, Poland, in November 2024. The GCCA Cold Connection program is a great way to get an understanding of important and emerging cold chain markets and share experiences – to find out more about the meeting opportunities and other events across the world visit gcca.org/events.

In contrast, top exports to markets outside the EU include:

- Dairy products ($1.16 billion)
- Poultry meat ($1.01 billion)
- Bread and bakery items ($991.89 million)
- Chocolate and related products ($844.74 million)

Consumer Trends

A number of trends are shaping Polish consumption habits – all of which point towards a greater need for logistics options, according to the organizers of WorldFood Poland.

Frozen food consumption is on the rise. Forty-three percent of Poles, whose busy lifestyles leave little time for lengthy meal preparations, consume ready-to-eat, frozen meals on weeknights. This sector has been growing at roughly 3% annually. Expect suppliers to step up delivery orders in the coming years, which means increased scope for expansion into Poland for cold chain operators.

Where Poles buy food has also largely changed since the millennium. Hyper and supermarkets now dominate with a 72% market share of Poland's food retail market, and are expected to grow.

Poland's organic food sector is growing at an unprecedented rate, 20% year-on-year, meaning huge demand for fresh, top quality fruits and vegetables.

Verbruggen notes a recent change in consumer trends resulting from the war. "Because of the many Ukrainians in Poland, a lot of retailers now have a Ukrainian assortment of sweets and dairy products among other items."

The cold chain logistics market size of Poland is estimated at $3.32 billion (USD) in 2025, and is forecast to reach $5.46 billion by 2030, at a compound annual growth rate (CAGR) of 10.43% during the forecast period 2025 to 2030, according to Modor Intelligence.*

Energy and Labor

The impact of rising inflation, fuel and energy costs on the region and the cold chain industry has stabilized, and most of the cost impact has been absorbed in pricing, notes Verbruggen. "I see no negative trend in the profitability of the cold chain sector. The general transport sector, unfortunately, does not share the same story line, and overall, it's a difficult time for carriers and forwarding companies."

In 2022, Verbruggen's company had approximately 100 workers from Ukraine. He said a handful returned to Ukraine to join the military, which was temporarily disturbing without having a structural impact on operations.

"Many of the initial refugees, estimated at around 2 million, have regulated their stay and our integrating into society," Verbruggen says. "This also meant a large inflow of new workers into the Polish economy, and in our sector, it means more warehouse workers and for retailers, many new cashiers."

ALEXANDRA WALSH is a Senior Publishing Consultant with Association Vision and Editor-in-Chief of COLD FACTS.

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LEADERS ELECTED TO GCCA WAREHOUSE, TRANSPORTATION, GCCF AND CEBA BOARDS

Tim Ludwig, Richard Patenaude, Ken Wah and Sam Tippmann fill Chair roles.

By Shane Brennan

The GCCA and GCCF rely on volunteer leaders to set strategies and ensure that the members receive the value and representation the industry needs. The GCCA is governed by two boards, one representing specifically warehouse interests and the other representing transportation. These boards oversee the events, advocacy and advisory activities the organisation delivers for our global membership. The GCCA is led by a Board of Governors, and they oversee the charitable work of the organization including the popular Cold Chain Institute, the research and advisory services of groups like the Council of Scientific Advisors and the international development projects.

Tim Ludwig, incoming Chair of the Global Cold Chain Alliance Warehouse Board and President of Bradner Cold Storage

Join us in welcoming the new chairmen and board members that will serve our industry in 2025.

Ludwig Leads GCCA Warehouse

Tim Ludwig is the incoming Chair of the Global Cold Chain Alliance Warehouse Board and President of Bradner Cold Storage, British Colombia, Canada.

"It is an honor to take on this role," says Ludwig. "Being part of the Global Cold Chain Alliance has been invaluable to me, providing a vital network, market intelligence and practical advice and support to our business for many years. I look forward to stewarding the organization's Warehouse Board through this crucial period of strategic renewal. I welcome the new members of the board and thank all my colleagues in advance for their support in the exciting 12 months ahead.

"The cold chain is a reliable, often hidden, part of the global food and perishable goods supply chain, but we have found ourselves increasingly in the spotlight in recent years. A series of unpredictable events across the world have challenged the supply chain, and we enter 2025 expecting more dynamic change. I am proud of how our industry has coped and thrived. I am extremely optimistic about the years ahead.

"As we update our strategy, working with our new President and CEO, Sara Stickler, I will be focused on three priorities: driving greater engagement with our members across the world, ensuring we are relevant and responsive to the current and emerging leaders of our industry and ensuring we have a strong value proposition for our warehouse membership."

Francisco Moura, CEO of IceStar (Santiago, Chile), supports Tim Ludwig as Vice Chair, and **Larry Alderfer**, President and CEO, United States Cold Storage (New Jersey, United States) is Treasurer. **Jason Dreisbach**, Chair of Dreisbach Enterprises (California, United States), will serve as Immediate Past Chair.

For the GCCA Warehouse Directors-at-Large positions, the membership approved the following slate of candidates to serve three-year terms effective January 1, 2025.

- **Devon Anders**, InterChange Group Inc., Harrisonburg, Virginia, United States
- **Bryan Hedge**, CORE X Complete, Stur-

bridge, Massachusetts, United States
- **Stephen Draper**, Envision Cold, McAllen, Texas, United States
- **Chris Murphy,** Sierra Pacific Warehouse Group, Modesto, California, United States
- **Henry Pringle**, Constellation Cold Logistics, Luxembourg

The following current board members were approved to serve an additional three-year term effective January 1, 2025.

- **Russell Leo**, RLS Logistics, Mt. Laurel, New Jersey, United States (renominated)
- **John Tippmann**, Interstate Warehousing, Wayne, Indiana, United States (renominated)
- **Sean Vanderelzen**, Lineage, Novi, Michigan, United States (renominated)

To view the full roster of GCCA Warehouse members visit gcca.org/about/gcca-warehouse

Patenaude Leads GCCA Transportation

Richard Patenaude is the incoming Chair of the Global Cold Chain Alliance Transportation Board and President of Congebec Transport, Quebec, Canada.

Global trade relies on efficient and reliable transportation," says Patenaude. "The global cold chain has been tested in recent years, and there remain big challenges ahead. With the current uncertainty around the trading relationships between the world's global trading blocs, we expect to see various impacts both domestically and across borders around the world.

"We can also anticipate further disruption from climatic and geopolitical events and an ongoing challenge of global policies to decarbonize all modes of transport. A strong voice for cold chain truckers, rail and air cargo has never been more critical and will provide significant growth opportunities in the years ahead.

"GCCA transportation provides the insights and tools to help professionals across the chain to be as prepared as possible for the dynamic changes ahead for our industry. I thank all my colleagues on the Board, and welcome our new board members, with special appreciation to the wider Alliance for their support and ongoing partnership."

Richard Patenaude, incoming Chair of the Global Cold Chain Alliance Transportation Board and President of Congebec Transport

Patenaude is supported by **Robert Fay**, Florida Freezer, as Vice Chair. **Don Durm**, PLM Fleet, serves as Immediate Past Chair.

For the GCCA Transportation Directors-at-Large positions, the membership approved the following slate of candidates to serve three-year terms effective January 1, 2025.

Ken Whah, incoming Chair of the Global Cold Chain Foundation Board

- **Tom Brennan**, Americold, South Plainfield, New Jersey, United States
- **Renier Du Preez**, Digistics, Johannesburg, South Africa
- **Jason Massey**, Ndustrial, Raleigh, North Carolina, United States
- **Brook Miller**, Envision Cold, McAllen, Texas, United States

To view the full roster of GCCA Transportation members visit gcca.org/about/gcca-transportation

Wah Leads Foundation

Ken Whah is the incoming Chair of the Global Cold Chain Foundation Board.

"The Global Cold Chain Foundation is the jewel in the crown of our Alliance," says Whah. "I am proud to take on the role of GCCF Chair, especially as we celebrate the 60th year of our unique training program, the Cold Chain Institute. For decades, we have provided unique peer-to-peer education, helping inspire emerging leaders across the cold chain to reinforce their knowledge and build their networks. The global growth of the program is really exciting, and we look forward to supporting that growth through the next 12 months.

"Our international projects program continues to support cold chain business across emerging economies in Latin America, Africa and East Asia. As we face the major challenges and opportunities facing our world, the importance of having a secure, well-invested and valued cold chain cannot be underestimated. We will continue to find ways to research markets and mentor and train professionals to help the continued growth of the warehouse and transportation infrastructure that underpins successful economies and drives prosperity.

"I thank all the leaders from across the world that give time to serve our Foundation, especially my fellow board members, and I look forward to working with them all in the year ahead."

Ken Whah is supported by **Adam Forste**, Lineage Logistics, as the Vice Chair and **Graham Harvey**, NewCold, as Treasurer. **Mickey Hoffmann** from United States Cold Storage will serve as Immediate Past Chair.

For the GCCF Governors-at-Large positions, the membership approved the following slate of candidates to serve three-year terms effective January 1, 2025.

- **Josh Cronan**, ARCOLD Design/Build, Atlanta, Georgia, United States
- **William Duggan**, Eskesen Advisory, Morristown, New Jersey, United States [re-nominated]
- **Luis Jorge**, Rannik/IS Services, Santo Domingo, Dominican Republic
- **Mathew Meredith**, Ifria Cold, Wilmington, Delaware, United States
- **France Pomerleau**, Congebec, Quebec City, Canada
- **Kirk Robertson**, Terra Vista Capital, Washington, D.C., United States [Public Member]
- **Gary White**, Bellingham Cold Storage, Bellingham, Washington, United States

To view the full roster of GCCF Board members visit gcca.org/about/global-cold-chain-foundation

Continuity at the Top at CEBA

The Global Cold Chain Alliance is proud to partner with the Controlled Environment Building Association (CEBA). The board oversees all aspects of CEBA's work across the world, including events, advisory work and the growing CEBA Professional Development program.

Sam Tippmann, President of TI Cold, Florida, United States, is Chair of the Controlled Environment Building Association Board for a two-year term.

Tippmann says, "It's an honor for me to be entering my second year as CEBA Chair. With record membership, conference attendance and engaged committees, our association enters 2025 stronger than ever. All our members can be extremely proud of our growing value proposition, engaged community and dynamic network of experts."

At the CEBA Conference in November 2024, the membership approved the following candidates to serve new three-year terms: **Scott Guimond** from Fisher Construction as Vice Chair and **Michael Jones** from Primus as Treasurer. **Marko Dzeletovich** of Coldbox Builders will serve as the Immediate Past Chair.

The CEBA membership approved the following candidates to serve new three-year terms.

- **Robert Brodsky**, Stellar, Jacksonville, Florida, United States
- **Michael Cody**, Ware Malcomb, Irvine, California, United States
- **Matt Fleckenstein**, RITE-HITE, Elmhurst, Illinois, United States
- **Peter Gofredo**, Frazier Industrial Company, Long Valley, New Jersey, United States
- **Steven Hansen Jr.**, ThermalCraft, Irvine, California, United States
- **Kate Lyle**, Lamar Johnson Collaborative, Culver City, California, United States
- **Anita Nanda**, Americold, Atlanta, Georgia, United States
- **Gary O'Donnell**, Karis Cold, Schaumburg, Illinois, United States
- **Mike Petros**, Nucor Insulated Panel Group, Tampa, Florida, United States
- **Luke Waite**, FREEZ Construction, Little Elm, Texas, United States

To read the full roster of CEBA Board Members visit gcca.org/about/https://www.gcca.org/about/controlled-environment-building

Sam Tippmann, Chair of the Controlled Environment Building Association Board, President of TI Cold

COLD CHAIN DEVELOPMENT

NEWS ABOUT GCCF INTERNATIONAL PROJECTS

This column features news about key projects of the Global Cold Chain Foundation (GCCF) and its work with members, aid organizations and international development partners to help emerging economies and lower-income countries meet the challenges that arise when growing a safe and efficient global cold chain.

NEW PROJECTS

Bangladesh Cold Chain Network Development Project, 2024 – 2026

Partnered with Venture37 and LixCap

GCCF will provide cold chain technical assistance to a new project in Bangladesh. Funded by the U.S. Trade and Development Agency (USTDA) and in partnership with Venture37 and GCCA member LixCap, GCCF will support the cold chain feasibility study, conceptual designs and equipment identification for a private company in Bangladesh. This project seeks to develop the cold chain network and offers opportunity for U.S.-based equipment and service providers to enter the Bangladeshi market.

Cambodia Food for Progress Project, 2025 – 2030

Partnered with Venture37

Funded by the U.S. Department of Agriculture, this Food for Progress project in Cambodia will improve implementation and development of food safety regulations by improving post-harvest handling, increasing adoption of climate smart technologies, providing training on best food safety/SPS practices, and strengthening market linkages. GCCF will leverage its existing network in the region to provide cold chain technical expertise for cold storage design and operations.

Rwanda Food for Progress Project, 2025 – 2030

Partnered with Cultivating New Frontiers in Agriculture (CNFA)

Food for Progress Rwanda will improve food insecurity, nutrition and trade of export crops by refining domestic food safety frameworks, enhancing technical capacity for laboratory testing and international accreditation and strengthening cold chain capacity. GCCF will provide cold chain resources and technical support to local cold chain operators and other organizations handling perishable products.

Fernando Cojulun (EPV Italia) on the left, visited cold storage facilities in the Dominican Republic to perform energy audits and provided feedback to enhance energy efficiency and reduce operating costs.

ACTIVE PROJECTS

Agricultural Trade and Climate Smart Innovations (ATraCSI) Project, 2023 – 2027

Partnered with Improving Economies for Stronger Communities (IESC)

At the end of 2024, Dr. Elhadi Yahia from GCCF's Council of Scientific Advisors, traveled to El Salvador and then to Guatemala to deliver postharvest processing and handling training for retailers and farmers. Fernando Cojulun of EPV Italia delivered onsite technical assistance to a Guatemalan logistics and air cargo handling service provider.

Bangladesh Trade Facilitation (BTF) Project, 2020 – 2025

Partnered with Venture37 and LixCap

Working closely with the project staff and GCCA member LixCap, GCCF delivered a webinar with U.S. Commercial Service to highlight opportunities for U.S. operators and suppliers to access the Bangladesh market. GCCF continues to support curriculum development for a local vocational school to educate local commercial refrigeration technicians and engineers to provide service and maintenance for cold chain equipment. Finally, GCCF experts continue to advise on best practices in warehouse operation and design with additional technical assistance trips taking place in November and December.

Dominican Republic Trade Safe (TraSa) Project, 2021 – 2025

Partnered with Improving Economies for Stronger Communities (IESC)

GCCF is drafting a perishable handling handbook in Spanish with the aid of Dr. Elhadi Yahia, member of the GCCF Council of Scientific Advisors. Fernando Cojulun of EPV Italia visited cold storages in the Dominican Republic to perform energy audits and provided feedback to enhance energy efficiency and reduce operating costs. Additional training opportunities are under consideration as the project plans out its final year.

West Africa Emerging Markets Program, 2024 – 2025

In December, the assessment team comprised of GCCA and CEBA members presented their analysis of the cold chain in West Africa and recommendations for future training and mentorship programs, including consultations and a study tour to South Africa in 2025. In January, the project will kick off its mentorship program, connecting local operators with international experts who can advise on best practices in various aspects of the cold chain.

Mauritania Food for Progress: Horticulture and Climate-Smart Agriculture Project, 2024 – 2025

Partnered with Partners of the Americas and LixCap

GCCF has been subcontracted by LixCap and Partners of the Americas to deliver technical assistance and educational programming for local operators. In collaboration with design-build experts, GCCF will deliver conceptual designs for cold storage in Mauritania, with respect to locally available materials and anticipated commodities. GCCF will also deliver training and support investment seminars in the country in 2025.

Ongoing Industry Support to Reduce Food Loss and Waste

GCCF has completed three courses planned for the four-course virtual training that will be housed in the GCCF Cold Chain eCampus. GCCF is also developing a toolkit for members that will provide information on how to donate product and provide ideas on activities that members can take to support their community with food rescue. The toolkit will also include regional policy-specific resources.

A delegation from Bangladesh was joined by GCCF Technical Expert Harshal Surange (right) and GCCA India representative Purnima Rawat at RefCold India.

Moving into 2025, GCCF plans to explore how to expand the pilot of the STOR app; how to measure and record the magnitude of dump/destroy orders; and will roll out a champions program for food waste reduction.

COOL SOLUTIONS

SCIENTIFIC ANSWERS TO COLD CHAIN CHALLENGES

This section highlights a cold chain question and answer submitted through the GCCA Inquiry Service to the team of experts on the GCCF Council of Scientific Advisors (CSA) and the roster of advisors. Submit your cold chain questions to the Council of Scientific Advisors at www.gcca.org/inquiry.

Q: We have a customer that approached us about storing whole coconuts. They will come six to a box and either each coconut and/or the pallet will be shrink wrapped. The coconuts will be prepared in a way that will allow a user to drink the coconut water with a straw and then open the coconut to eat the meat. The product will be coming from Vietnam. The space we have available is 34° to 36°F (1.1° to 2.2°C), with a relative humidity (RH) of approximately 59%. Is this acceptable for storage of these coconuts?

A: The temperature is fine for coconuts, but the RH is a little low; ideally it should be between 65% to 85%, especially if the coconuts need to be kept for a few weeks. Coconuts are not distinctively prone to water loss, but they can get moldy with high humidity. These coconuts will be shipped by ocean from Vietnam to California, which means about 20 to 30 days on the water. Marine containers don't have humidification. I think that is the reason the exporter is using shrink wrap, and it is probably a good idea. The shrink wrap also means that the 59% relative humidity in your storage facility won't be a big issue. Still, you may want to increase the RH by using humidifiers.

At these ideal conditions of temperature (34° to 36°F, or 1.1° to 2.2°C) and RH (65% to 85%), the coconut can be maintained in a reasonably good quality for four to eight weeks, even without wrapping, though it's better with adequate wrapping. The wrapping (type of material and thickness) should not cause an excessive increase in RH, therefore, if used, it is better if the wrapping has holes.

If the coconut only needs to be kept for a few days, then the temperature and 59% RH will not cause harm. Nevertheless, if

your warehouse stores other fresh fruits and vegetables, you may see an improvement in the quality of many products by adding humidification in their storage room that brings the RH up to 85%.

This answer was provided by Dr. Elhadi Yahia, Postharvest Technology and Tropical Produce Expert and Dr. Jeff Brecht, Cool Climate Produce Expert.

Submit your burning cold chain questions to the Council of Scientific Advisors at www.gcca.org/inquiry or at inquiry@gcca.org.

GLOBAL COLD CHAIN FOUNDATION

Council of **Scientific Advisors**

The Global Cold Chain Foundation (GCCF) Council of Scientific Advisors is an eminent group of food scientists, logistics, and packaging experts from around the world. The Council provides cutting-edge research and advice to members of the Global Cold Chain Alliance and its Core Sectors.

Dr. Michael Jahncke

Virginia Tech University, Fish Products Expert

COUNCIL CHAIRMAN

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Dr. S. Paul Singh
Michigan State University,
Packaging & Labeling Expert

Dr. Victoria Salin
Texas A&M University, Agriculture Economics Expert

Dr. Elhadi Yahia
Universidad Autónoma de Querétaro, Mexico, Postharvest Technology, Tropical Fruit & Produce

Have a burning cold chain question?

Submit an inquiry to the Council of Scientific Advisors at www.gcca.org/inquiry

MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

AGILE COLD STORAGE, LLC, is set to break ground on a new cold storage warehouse in Kaufman, Texas, United States. The facility, spanning 122,949 square feet, is expected to open by the end of 2025, and will feature frozen, refrigerated, and deep-freeze temperature zones, ensuring products meet industry specifications and government regulations. Agile aims to provide services for receiving, storage, import/export, distribution, and shipping.

(Photo courtesy of A M King.)

A M KING has completed design and commenced construction on its fourth major project for Cheney Brothers, Inc. (CBI). The 386,047-square foot refrigerator/freezer distribution facility in Florence, South Carolina, United States, will include 45 loading docks, a Cheney Express (consumer e-club) and the largest culinary kitchen the company has developed to date.

PLM FLEET was named overall winner for *Food Logistics*' Top Supply Chain Projects award, for its work in tracking and tracing frozen mangos from Peru to a grocery store in Indiana, United States, to determine the carbon footprint of a frozen mango in the cold chain. PLM, Kroger, Dole, AFFI and Dr. Dennis Heldman with the Ohio State University and member of GCCF's Scientific Advisory Council, were involved in the project.

PLM FLEET's Don Durm, GCCA Transportation Immediate Past Chair, was

also interviewed for *Food Logistics* on the 204 Rule. In the article, "FSMA 204 Compliance to Fundamentally Change How the Cold Chain Works | Food Logistics" that was posted in early January, Durm references GCCA's *Cold Chain – Transportation Best Practices* guide.

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RAYMOND CORPORATION won an array of awards from Forbes, Plant Engineering, Food Shippers of America (FSA), Supply & Demand Chain Executive (SDCE), International Warehouse Logistics Association (IWLA), Food Logistics and other organizations in 2024.

The honors Raymond received include Forbes' America's Best Midsize Employers list —from the engineering and manufacturing sector. Out of 400 organizations, Raymond secured the number 5 ranking.

• • •

(Photo courtesy of Vertical Cold Storage.)

VERTICAL COLD STORAGE announced the opening of its facility in Burleson, Texas, United States, which features blast freezing, case picking, kitting, labeling and more. The facility is more than 400,000 square feet, with an average clear height of 55 feet and 53 dock doors. It includes multiple rooms convertible to -20 degrees Fahrenheit.

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VERTICAL COLD STORAGE has opened its multi-modal distribution site in Kansas City in the United States. The 311,000-square foot facility features 47,000 pallet positions, state-of-the-art blast freezing technology, and multiple rooms convertible from +35° F to -20° F. The site is located adjacent to the CPKC intermodal terminal and within 30 miles of the BNSF, Union Pacific and Norfolk Southern terminals, enabling nationwide access.

BE THERE IN 2025

Throughout the year, the Global Cold Chain Alliance, the Global Cold Chain Foundation and the Controlled Environment Building Association host events worldwide that offer a unique opportunity to meet, learn and be inspired. Here is your 2025 calendar.

GLOBAL COLD CHAIN FOUNDATION COLD CHAIN INSTITUTE

This event, designed for employees with clear management potential and executives new to the industry, features more than 40 classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.

28TH GCCA EUROPEAN COLD CHAIN CONFERENCE & EXPO

Bringing together decision makers to discuss market trends, industry challenges, business solutions and technological innovations. The conference also provides ample networking opportunities, enabling attendees to meet and connect with professionals from throughout Europe and around the world.

Audience: Executives and managers from temperature-controlled, third-party logistics companies.

GCCA BRAZILIAN COLD CHAIN CONGRESS

This educational event focuses exclusively on the temperature-controlled logistics industry and features opportunities and solutions for business development.

Audience: High-level executives in temperature-controlled warehousing or logistics.

GCCA COLD CHAIN POLICY FORUMS

The GCCA Global Policy Forum offers education and interaction with government and agency officials regarding the rules and regulations that impact the cold chain.

Audience: Executives with compliance and regulatory responsibility, members of safety and government affairs committees.

GCCA LATIN AMERICAN COLD CHAIN CONGRESS

The meeting enables GCCA members and leaders in the temperature-controlled industry to interact, learn about industry trends and expand their knowledge. The Congress also serves as a discussion forum for issues of interest to multi-regional cold chain industry leaders.

Audience: Senior executives in temperature-controlled warehousing or logistics.

GCCA AFRICAN COLD CHAIN CONFERENCE

The event brings together cold store operators, controlled-environment builders, equipment suppliers and service providers from across Africa to discuss opportunities and innovations of this essential sector

Audience: Executives and managers from temperature-controlled, third-party logistics companies.

GCCF COLD CHAIN INSTITUTE EUROPE

Designed for employees with clear management potential and executives new to the industry, the event features extensive classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.

134TH GCCA CONVENTION

The annual gathering of global warehouse and transportation executives, plus suppliers of equipment and services to the industry, features education, networking and business development opportunities for third-party logistics companies and warehouse operators.

Audience: Owners, CEOs, presidents, executive leadership teams.

44TH CEBA CONFERENCE & EXPO

The annual meeting of CEBA members offers education, business development opportunities and networking for company executives managing the building of new cold storage facilities and cold storage builders.

Audience: Chief engineers, regional facility managers, regional facility maintenance leads, construction engineer managers, owners/CEOs who are building or expanding facilities.

GLOBAL COLD CHAIN ALLIANCE®

60th Anniversary COLD CHAIN INSTITUTE
Powered by the Global Cold Chain Foundation

CEBA
Controlled Environment Building Association

28TH EUROPEAN COLD CHAIN CONFERENCE

Organized by the Global Cold Chain Alliance (GCCA), the Conference is the premier platform for executive networking in Europe, and the pinnacle occasion to connect, collaborate and propel your expertise within the industry.

GCCA's European Cold Chain Conference, scheduled to take place from March 26 to 28 at the Copenhagen Marriott Hotel in Copenhagen, Denmark, is the one and only forum where the multiple segments of cold chain get together at one time. Nearly 200 cold chain professionals from warehousing, transportation, construction, technology and equipment companies from across Europe and other regions are expected to attend.

Thought-Leading Agenda

The Conference provides a unique stage to understand market developments and upcoming trends, to address leading cold chain issues and learn about latest innovations with industry captains and business experts.

- **Consumer Trends and Market Dynamics** – a dive into the intricacies of the market dynamics: from local production to international export, understand how production, governments and consumers influence product flows and impact on logistics.
- **Future-Proofing Energy Systems for Cold Chain Logistics** – in the light of ongoing regulatory, market and consumer pressures, a panel of experts will explore the most efficient and sustainable solutions to decarbonize transport and optimize cold storage energy systems.
- **Digital Transformation, the Way Forward** – from paperless transport flows to AI-led operations and cybersecurity, explore today's available technologies and future innovation for more robust and transparent logistics operations.
- **Adaptive Supply Chain Strategies to Ensure Food and Health Security Across the Globe - t**he global supply of safe food and health products is ensured in large part by the cold chain. In addition to discussing the significance of trade facilitation in preserving food and health security, top global corporations will share their approaches to delivering on ideal, sustainable supply chain models.

Conference Speakers

The carefully designed educational program will feature top-notch speakers, industry captains and thought leaders who will provide unique insights into market trends, industry challenges and opportunities, technology innovation and new business ideas.

John Clarke, former Director for International Relations at DG Agri and the Chief Negotiator for Agriculture in the European Commission until 2023, will be a keynote speaker and help guide our discussion on the opportunities and threats for cold chain businesses.

Other confirmed speakers include:

- **Thomas Sørensen**, Head of Cold Chain Unit, UNICEF
- **Lars Mokness**, Analyst, Norwegian Seafood Council
- **Jonathan Gagg**, Engineering and Procurement Director, Magnavale
- **Luuk Mulder**, Director Facility and Engineering, Constellation Cold Storage
- **Ben van Leeuwen**, European Council Vice Chair, Frigolanda Logistics Group
- **Sara Stickler**, President and CEO, Global Cold Chain Alliance

Networking

Making connections with your fellow delegates is an important aspect of any conference experience. The European Cold Chain Conference offers ample opportunities to connect/re-connect with cold chain professionals from across the globe.

Innovation & Technology

In parallel to the educational program, the conference also features a dedicated cold chain expo where attendees can learn about the latest technology and innovation that could improve their operational efficiency and business performance.

Suppliers and vendors can increase their company's brand and exposure to a targeted, qualified audience, through bespoke sponsorship and/or exhibiting. Each opportunity has been customized to spotlight your company throughout the entire event. Learn more about sponsorship and exhibiting opportunities.

For more information on the Conference, visit https://www.gcca.org/events/gcca-european-cold-chain-conference/about/

We look forward to seeing you in beautiful Copenhagen!

NEW MEMBERS

NEW MEMBER COMPANIES OF GCCA CORE PARTNERS

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Banks Cold Storage
Gainesville, Georgia, United States

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