

# SPEAKER SPOTLIGHT



Don't miss **James Bell, CEO,**  
**Viking Cold Solutions** at



## Energy Storage

NEWS

27-28 FEB 2018

VICTORIA PARK PLAZA - LONDON, UK

### Who is Viking Cold Solutions?

Our company, Viking Cold Solutions, is a Thermal Energy Storage company that provides ground-breaking technology to address challenges faced by the global cold chain. Operators in this industry, which consumes over \$30 billion USD worth of electricity annually to keep food cold, now have the flexibility to determine how they purchase, store, and consume that energy. Our Thermal Energy Storage (TES) systems combine the physics of phase change materials (PCM) and intelligent controls to reduce energy consumption and shift time-of-use while better maintaining stable freezer temperatures.

### What are the key challenges the industry faces that Viking Cold Solutions addresses?

Our customers face challenges from rising energy costs, globalization, and tight margins. To ensure food quality and safety, the global cold chain must maintain stable temperatures 24 hours a day, which requires massive amounts of energy. Viking Cold's technology reduces this energy need by greater than 25 percent. In fact, energy usage is our customers' second highest operating cost, and low temperature storage has the highest energy demand per cubic foot of any industrial category. Reducing such a large expense not only benefits our customer's bottom line, but it also helps protect food and the environment.

### In what market segments is Viking Cold Solutions active?

Viking Cold provides innovative TES solutions throughout the global cold chain with a particular focus on frozen food distribution warehouses and supermarket freezers. There are millions of cold storage applications for our TES systems globally, which would provide hundreds of gigawatts of energy storage. Our TES systems have been proven to effectively shift energy demand, reduce

energy consumption by more than 25 percent (representing over \$8 billion of potential annual savings), prevent food spoilage and waste, and significantly reduce the carbon footprint of refrigeration. Our TES systems have a life of more than 20 years and store energy at an installed cost of \$60 per kWh.

### In which of these segments are you expecting the greatest opportunities in 2018?

There are many global applications of TES technology. The greatest immediate opportunities are in low-temperature warehouses and supermarket freezers, especially in those markets with high energy costs and peak demand charges. We're seeing rapid growth in California, the Northeast U.S., Latin America, and the Caribbean. We have installations planned on 4 continents in 2018.

### Tell us a bit about a project you have worked on?

The San Diego Food Bank is the largest hunger-relief organization in San Diego County, California, and serves an average of 400,000 people per month. Feeding this many people requires a lot of food—some 22 million pounds per year—that must be safely stored and refrigerated, with minimal waste and at the lowest energy cost possible. The food bank is continuously looking for sustainable solutions to address these needs.

Viking Cold installed our turnkey energy-management solution that combined Thermal Energy Storage with a rooftop solar photovoltaic (PV) system. The system combines intelligent controls, a remote monitoring portal, and proprietary phase change material (PCM) formulated for the food bank's specific freezer temperature set-point. During daylight hours the PCM freezes, leveraging the solar-powered refrigeration equipment, and at night the refrigeration equipment is turned off. As warmer air rises in the warehouse,

the PCM adsorbs the heat, maintains stable temperatures, and eliminates 95 percent of the overnight grid energy consumption.

By relying on solar PV during the day and the TES system at night, the San Diego Food Bank achieved net zero energy usage and independence from the electric grid for its refrigeration and cold storage needs. Additionally, the San Diego Food Bank now has increased temperature stability and thermal backup protection which reduces its carbon footprint and provides meaningful energy cost savings that help benefit its mission. Partially as a result of this the San Diego Food Bank is the first food bank to achieve LEED Gold V4 Certification.

### Why are you attending this conference and what do you expect to get out of it?

I am a speaker in the Technology Comparison Session that is reviewing various storage technologies. We are raising the awareness and education level of the European market around Thermal Energy Storage and its benefits to operators and the grid to aid in our sales and marketing efforts.

### How are you financing your projects?

Viking Cold Solutions provides Storage as a Service for a subscription fee. We are backed by private equity, major lenders, and utilities.

### What will you be speaking about on your panel? Who are you looking to meet?

We want to ensure everyone knows that the cold storage market, formerly inaccessible because of its continuous, high electricity demand, now has an environmentally friendly and economical energy storage solution.

We plan to meet potential channel partners, energy aggregators, other technologies that pair well with us, and utilities to drive more opportunities for Thermal Energy Storage to benefit cold storage operators and the European utility grid.

For more information, please contact:

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