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Market Trends & Opportunities

Challenges & Technology Intersect

Food Retail Challenges

Regulation: New **energy and environmental** requirements

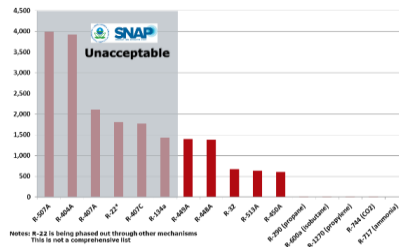


Uncertainty: The industry needs to move ahead and lead

Food Waste: **Sustainability** through the food chain

Operations: **Optimization and efficiency** demands

New Technology: Adaptation and **connectivity**



“May you live in interesting times.”

- Purported to be an ancient Chinese curse

New Technologies



Stand-alone control function

Seasonal TXV changes not required

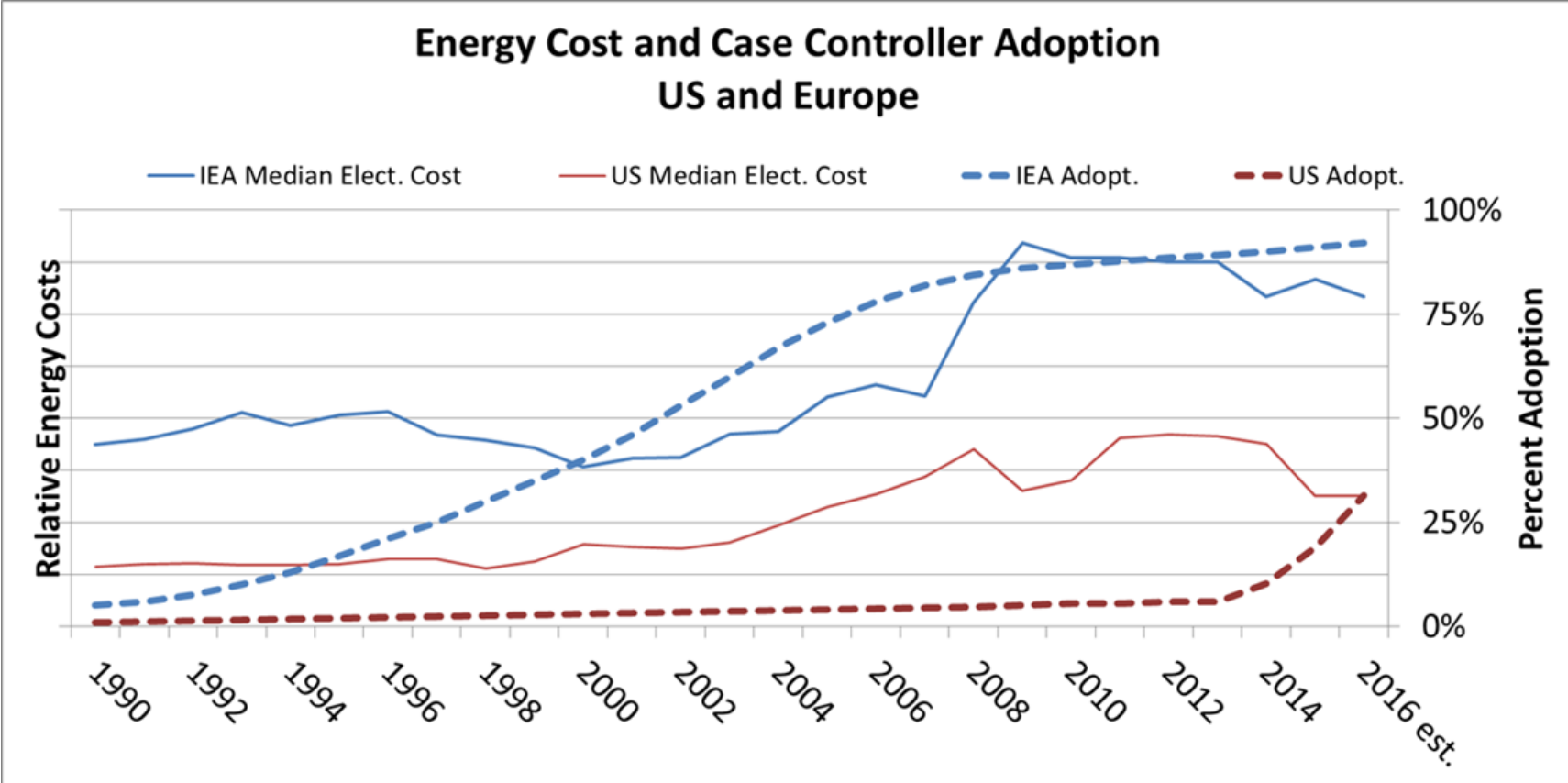
Reduced product loss

Reduced installation costs

Energy savings

Reduced carbon emissions

Gateway to CO₂



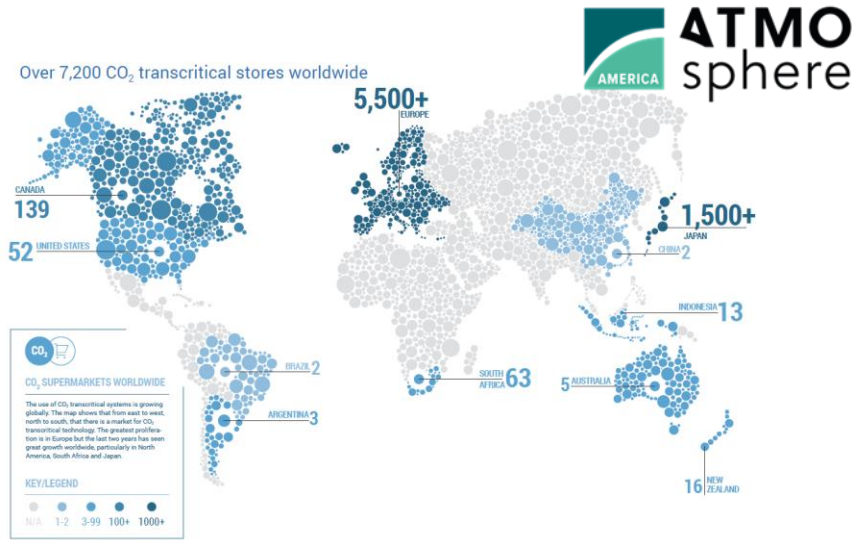
Natural Refrigerant Solution – Food Retail

Natural Refrigerants

- Primary long-term solution for food retail in Europe
- North American End-Game
 - CO₂ Transcritical is the state of the art for larger central systems
 - Operational performance and cost effectiveness
 - Training has improved but still remains a challenge

With the introduction of the Danfoss CTM Multi-Ejector

➤ Climate limitations on Transcritical CO₂, “the Transcritical equator” are **ELIMINATED**.



Source: 2016 GUIDE TO NATURAL REFRIGERANTS IN JAPAN, Shecco, June 2016

	2015 Units	Project 2016 Sales	2016 Units	% Growth
North America	191	160	351	84%
Europe	5,500	775	6,225	14%

Hannaford's CO₂ Remodel Store



Delhaize/Hannaford's has a corporate initiative to convert all stores to CO₂

- Hussmann & SystemesLMP provided & installed new CO₂ med/low temp rack into store machine room
- New Refrigeration piping pre-installed for new refrigeration cases
- DX and CO₂ systems ran parallel while installation of new cases been installed
- The challenge was scheduling and engineering without disturbance to customers or store staff
- Project was a success due to the fact everyone worked together in relation to planning and completion





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Thank you very much!

