



# Business Case for Natural Refrigerants

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June 12-14, 2018 – Long Beach





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## **Dover Food Retail – 2018 Market Trends**

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Director of Business Development and Industry Relations

# Defining Dover Food Retail



Dover Food Retail is the partner to customers seeking to create unique food experiences. Employing the capabilities of our industry-leading brands, **Anthony** and **Hillphoenix**, we are able to provide insight and a comprehensive portfolio of innovative solutions that enables our customers to sell more food, more profitably.



a **DOVER** company



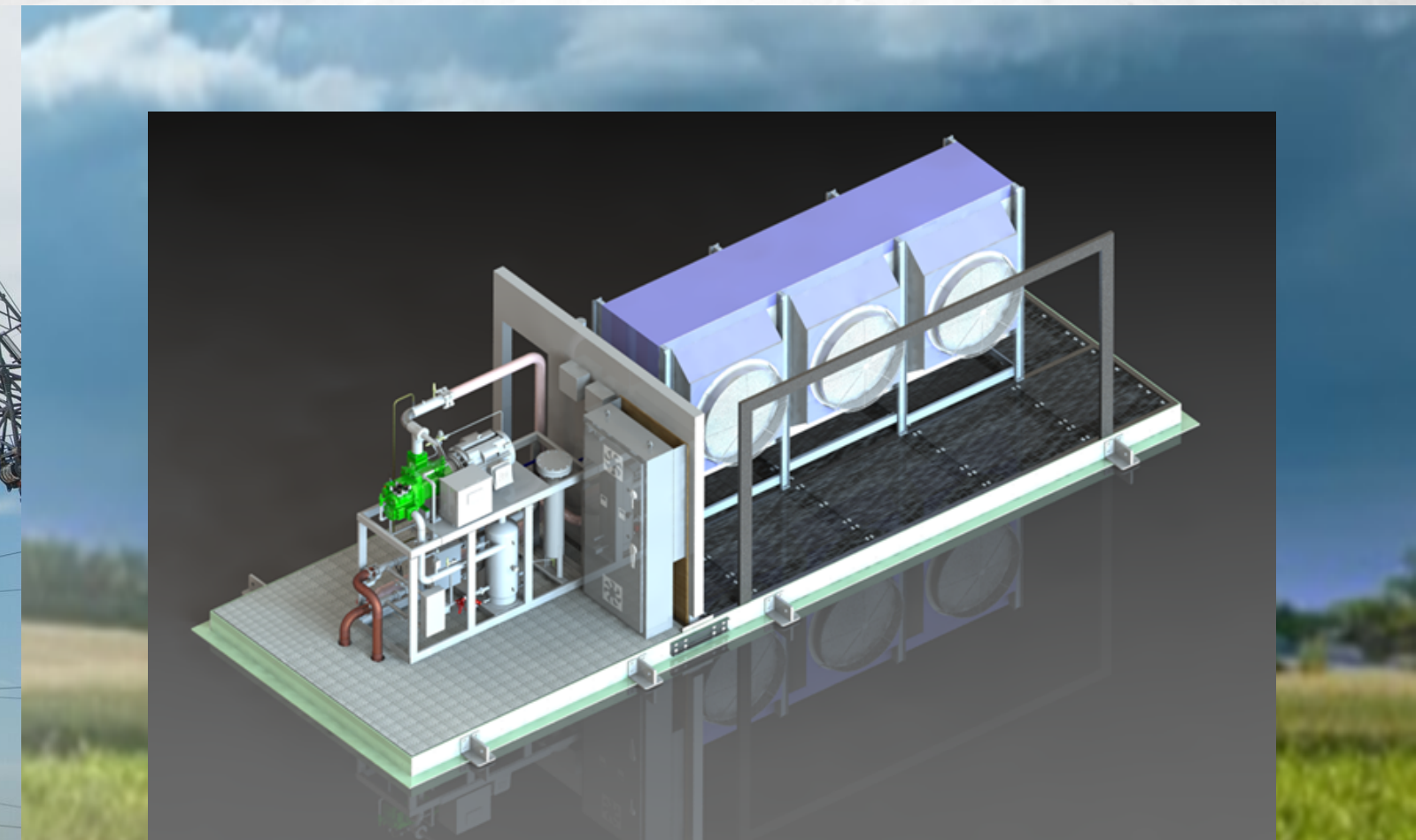
# OVERVIEW OF NATURAL REFRIGERANT BASED SOLUTIONS





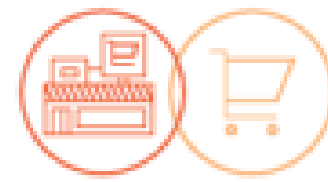
## Technology Partnership with NXXTCOLD LLC

- **36 Standard Models Configurable to 150+ Tons**
- **Flexible Product and Commissioning Training**
- **Largest Install Base in North America**  
75+ units operational
- **Extremely High Interest Growth**  
Doubling YOY





# Growth of CO2 Booster Systems in North America



**CO<sub>2</sub> Transcritical Stores**

IN : 2015

**139**  
CANADA

**52**  
U.S.

11 BRITISH COLUMBIA

15 ALBERTA

2 SASKATCHEWAN

2 MANITOBA

1 WASHINGTON

1 WISCONSIN

1 INDIANA

2 ILLINOIS

20 CALIFORNIA

1 OKLAHOMA

NEWFOUNDLAND AND LABRADOR 2

QUÉBEC 94

ONTARIO 12

NEW BRUNSWICK 1

MAINE 2

MICHIGAN 1

MASSACHUSETTS 1

CONNECTICUT 1

NEW YORK 8

VIRGINIA 1

OHIO 4

NORTH CAROLINA 1

TENNESSEE 2

GEORGIA 1

ALABAMA 1

LOUISIANA 1

FLORIDA 2



Total Transcritical Systems in NA

Total 2013

**30**

Total 2015

**141**

Total 2017

**325**

IN : 2013

**68**  
CANADA

**2**  
U.S.

IN : 2014

**93**  
CANADA

**14**  
U.S.



# Sustainable CO<sub>2</sub> refrigeration systems for supermarkets and industry

With over 10 years in the business Advansor is one of the leading OEM manufacturers of sustainable thermal systems for heating and cooling utilising CO<sub>2</sub> as a refrigerant. The systems are in use in supermarkets, frozen and cold storage facilities, power plants, the food processing and chemical industry as well as providing air conditioning for office buildings.

3926

CO<sub>2</sub> systems

33

Countries

335

Customers

314

MW installed



# OPPORTUNITIES AND CHALLENGES

**First Cost**



What are we spending?



**Total Cost of Ownership**



What are we saving?

Understanding total cost of ownership and savings that can offset first cost





# Learning Center

- The “Industry Standard” for training
- Standard and custom training programs for participating retailers
- Instructor-led and online curriculum
- Continue to invest and grow
- Received consecutive ASHRAE awards for the past six years

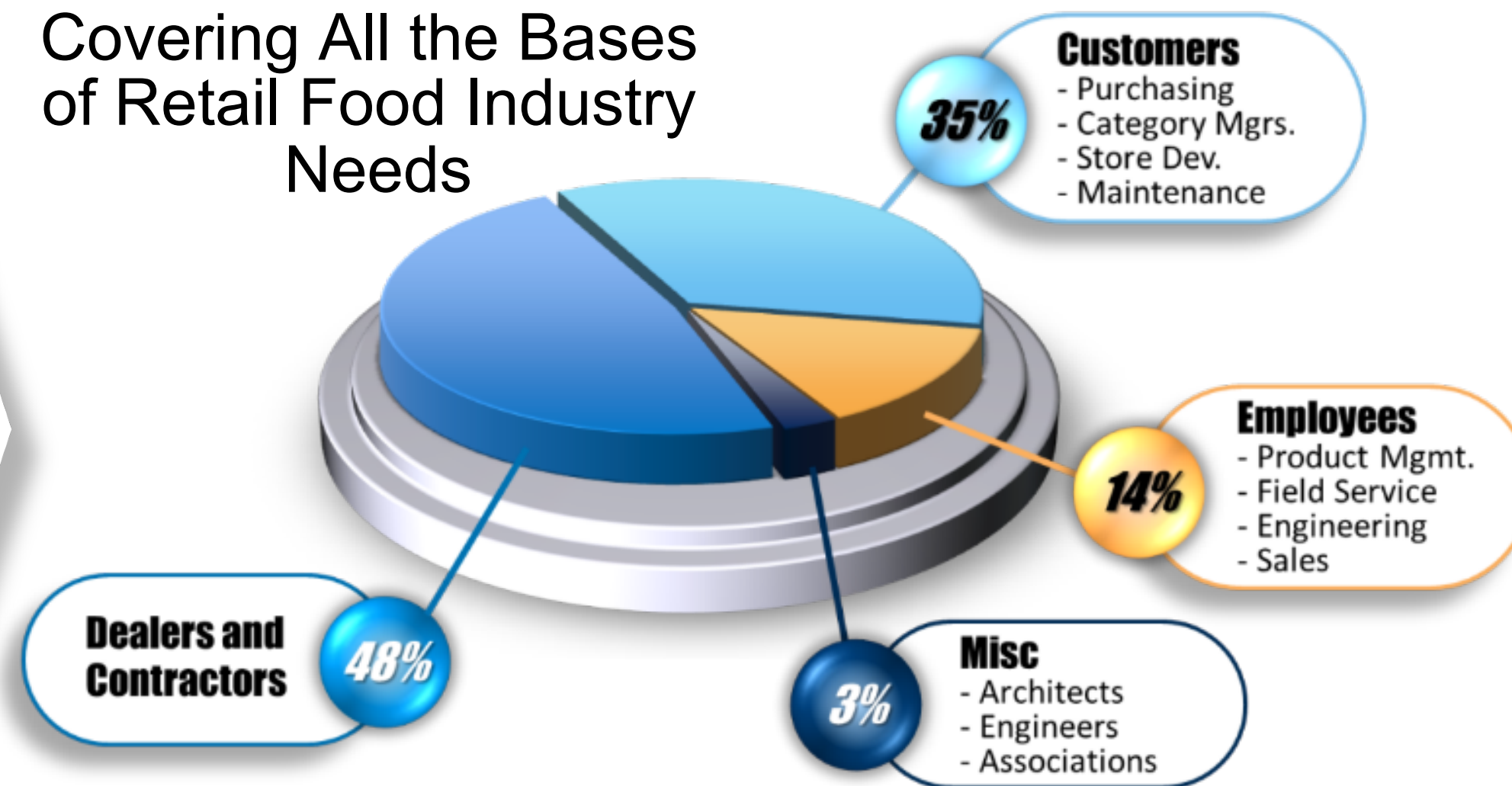


## ... Real Solutions

- Basic or Advanced Refrigeration Knowledge
- Food Handling & Safety
- Merchandising & Technology That Sells More Products
- Supermarket Sense
- Energy Savings & Sustainable Technologies
- Food Trends
- Latest Industry Technology

## ... for a Diverse Audience

Covering All the Bases of Retail Food Industry Needs



## ... and GROWING Fast!



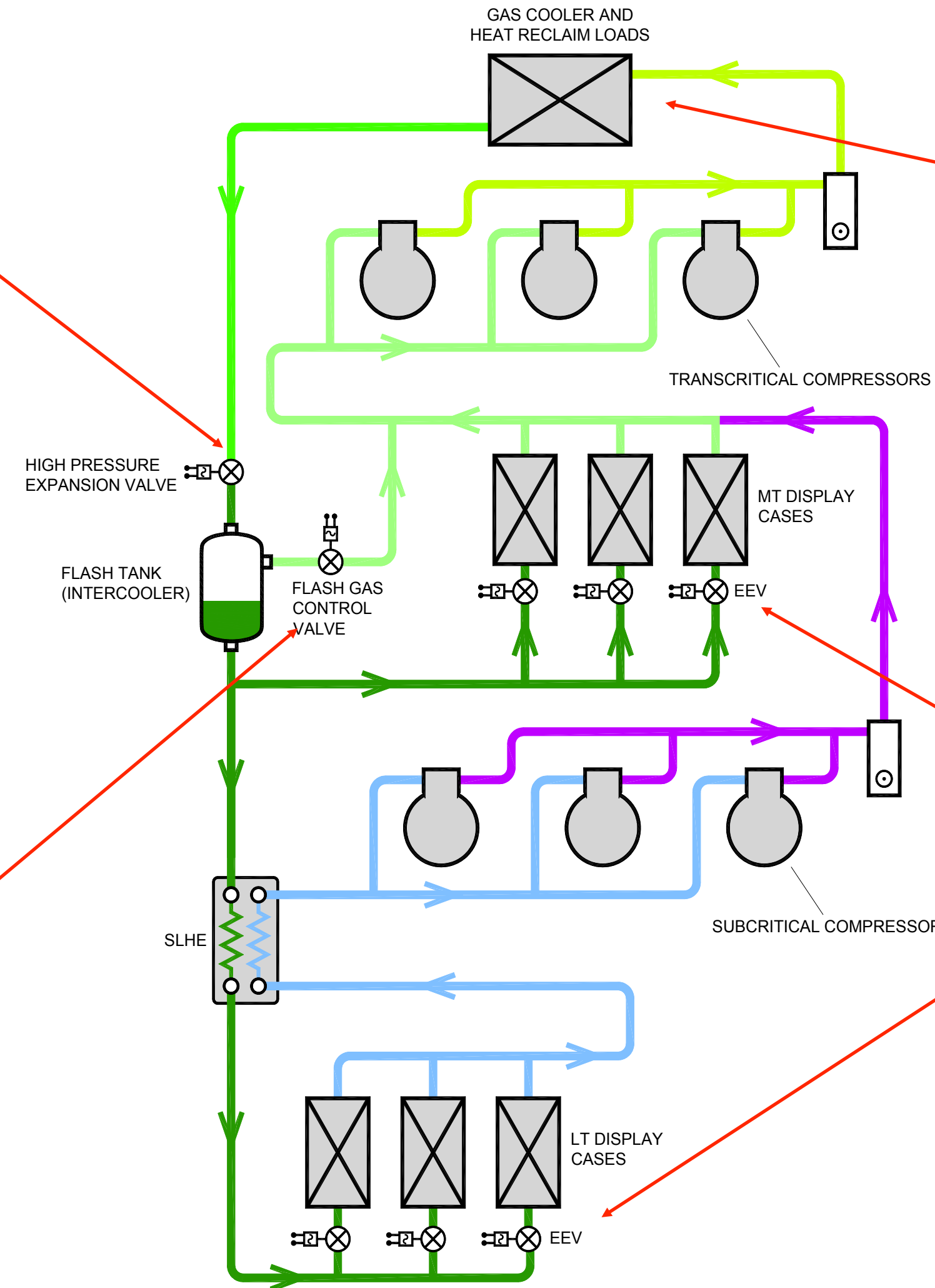


# OPPORTUNITIES AND CHALLENGES

**High Pressure Control Valve**



**Flash Gas Bypass Valve**



**Gas Cooler/Condenser**



**EEV's & Case Controller**





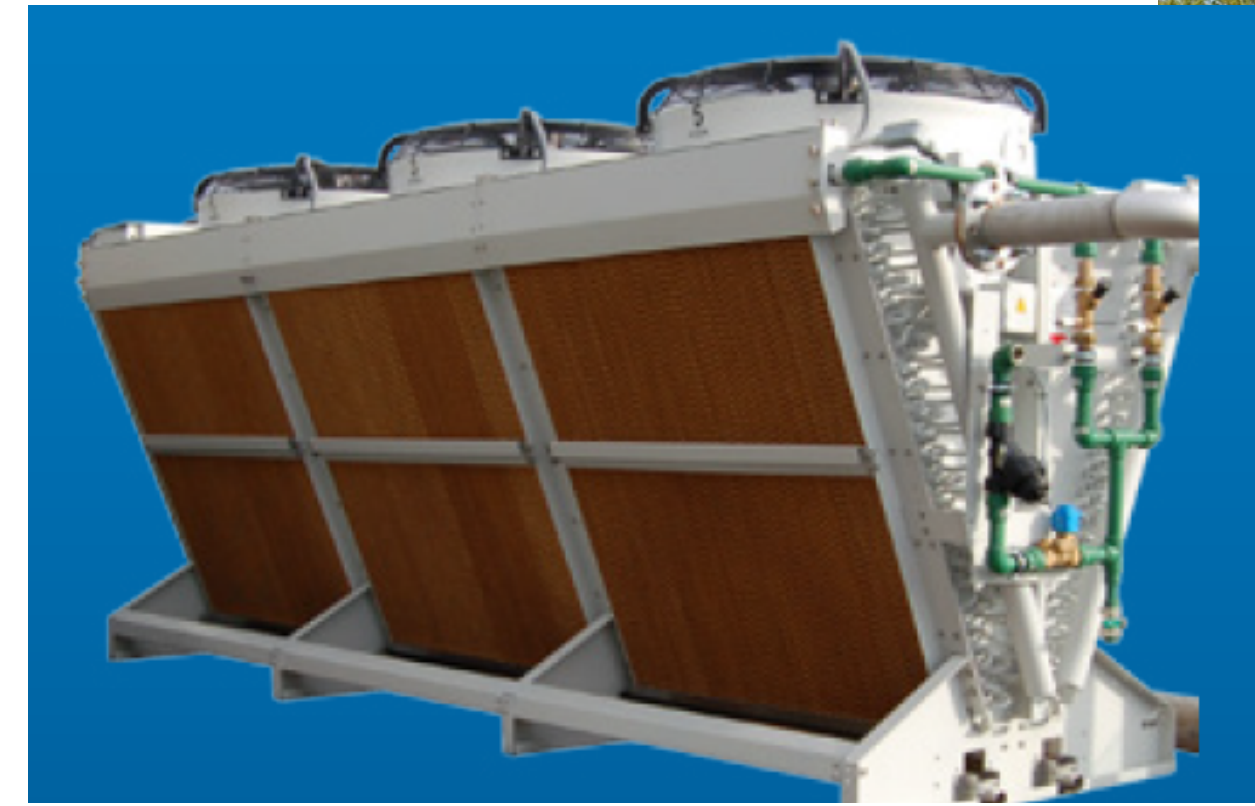


# FUTURE PLANS & NEXT STEPS

## Deployed 2013 High pressure sub coolers



- Using 45°F Facility Chilled Water
  - *Patents pending*
- Peak Savings 20–30%
- Annual Savings 6-15+%



## Deployed 2014 Adiabatic gas coolers



- Peak savings 20-30+%
- Annual savings 10%



## Deployed 2016 Parallel Compression systems



- Peak savings 12-17%
- Annual savings 6-8%

## Deployed 2017 Ejector with Parallel Compression



- Peak savings 15-20%
- Annual savings 8-10%





**One refrigerant. So many benefits.**

**ADVANSOR<sup>TM</sup>**

PART OF THE SECOND NATURE FAMILY BY HILLPHOENIX

**Leading CO<sub>2</sub> technology for refrigeration.**

- 100% environmentally friendly • non-toxic, inflammable
- no ozone depletion • no global warming impact
- low noise • single refrigerant • low cost of installation
- low cost of maintenance • compact design
- easy installation • easy service
- low energy consumption
- future-proof solution

**Fresh thinking.  
Responsible solutions.**

**Hillphoenix<sup>®</sup>**

A DOVER<sup>™</sup> COMPANY

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**ATMO**  
sphere

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Thank you very much!

