

# ATMOsphere Conference - Asia

## Phase-Out F-Gases and Shift to Natural Refrigerant

Tokyo, February 3, 2015



solutions for asia  
**natural refrigerants**

3-5 February 2015 in Tokyo

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**Coca-Cola Tokyo Research & Development Co. Ltd.**





# Clever Cooling vs. Global Warming

A global initiative of companies taking action to combat climate change by replacing fluorinated gases in refrigeration equipment with climate-friendly natural refrigerants

Recognized as a **“Partnership for Sustainable Development”** by the UN Commission on Sustainable Development

Web site: <http://www.refrigerantsnaturally.com/>

## MEMBERS



## SUPPORTERS



Member companies have collectively:

- Placed **3 MM plus HFC-free** refrigeration units in major countries around the world
- Avoided more than **1 MM tons of CO<sub>2</sub>** equivalent emissions



# Coca-Cola Goal

Phase-out **HFCs**

# Coca-Cola Strategy

Adoption of  
**Natural Refrigerant with  
CO<sub>2</sub> technology**



# Progress

HFC-Free units globally

20%  
Improvement  
vs. 2013



1.5<sup>MM</sup>

# Availability

CO<sub>2</sub> models certified

68  
additional  
certified  
vs. 2013

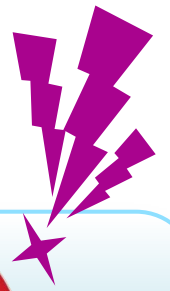


223

# Electrical Consumption

More energy efficient vs.  
equivalent HFC models

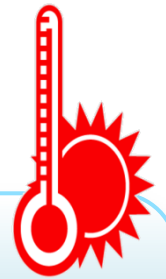
78%



# Proven Performance

Certified for harsh ambient  
conditions

38%





# Coca-Cola Japan Goal

**By 2020, all Vending  
Machines in the market  
with Natural Refrigerant**

# Coca-Cola Japan Progress

**On track**

The classic Coca-Cola logo in its signature red script font.

# Coca-Cola Japan Progress

- Vending Machine(VM): Energy Saving and Expansion of Natural Refrigerant

- **Reduced Energy Consumption per Machine to 1/6 in the past 15 years**
  - Heat-Pump Technology, LED lighting, Human Sensor, etc.
- **Since 2011, all new Can/PET VM are with Natural Refrigerants**
- **Since 2012, all new Cup VM are also with Natural Refrigerants**





# Coca-Cola Japan Progress

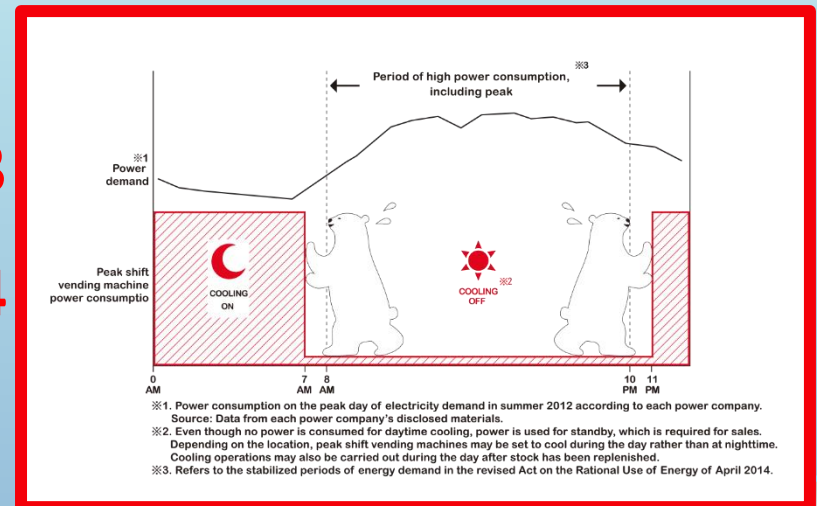
- Vending Machine(VM): Energy Saving and Expansion of Natural Refrigerant

- Launched Peak-Shift VM (CO<sub>2</sub> compressor) in 2013

- New concept of the energy saving during peak hours (day time) after the Great East Japan Earthquake

- 28,000 machines in 2013

- 83,000 machines in 2014 (Target)



# Peak-Shift Vending Machine



- **New Energy Saving HFC-Free Vending Machine**
  - Keep drinks cold maximum 16 hours without running a compressor
- **Max. 95% electric power reduction & No noise**
  - Peak-Shift during peak hours (7am to 11pm)
- **With CO<sub>2</sub> Natural Refrigerant compressor**
- **VIP (vacuum insulation panel) for insulation**
  - No impact on VM size and capacity
- **“Overall” cooling instead of “Zone” cooling**



# Public Recognitions

**Coca-Cola Peak-Shift Vending Machine with CO<sub>2</sub> compressor has received;**

**Energy Conservation Grand Prize**

**from “Minister of Economic, Trade and Industry”,**

**Excellence Award for Energy Saving**

**from “Eco-Products Awards Steering Committee”,**

**Letter of Appreciation**

**from “Heat Pump & Thermal Storage Technology Center of Japan” (HPTCJ),**

**GPA (Goodwill Promotion Alliance)**

**Gold Award and Jury’s Special Award**  
**sponsored by “Japan Promotional Marketing Institute”.**



# Success Factors

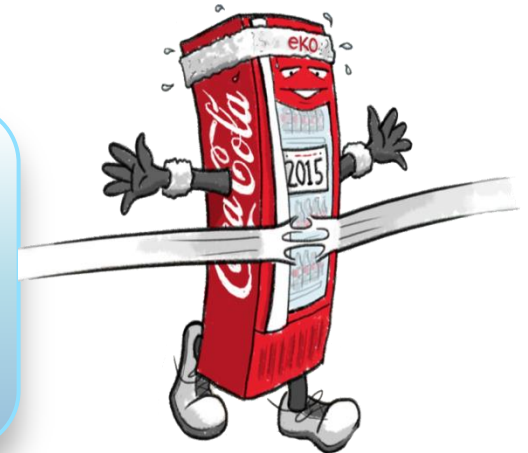
- **Global Strategy:**
  - Company's commitment to shift to HFC-Free
- **Specific Goals:**
  - Shift to Natural Refrigerant
  - Energy Saving – Peak-Shift
  - HFC-Free Thermal Insulator
- **Collaboration:**
  - CO<sub>2</sub> Compressor partner for scale and cost



# Actions Towards Our Goal

- **Supply chain development**
- **Leading the way with Refrigerants Naturally!  
and the Consumer Goods Forum**

- **Continuing the effort for smaller  
size equipment HFC-Free  
conversion**







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**THANK YOU!**