

# ATMOsphere Europe 2012



## Natural refrigerants:

### Status and challenges – views from Coop Norway

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# Facts and figures – Coop Norway

## Coop in Norway in figures:

- 110 local cooperatives
- ca. 1000 stores
- 22 500 employees
- 1.3 million members
- 3 755 mill € turnover
- 23,8 % market share

## Energy program 2007-2011:

- 38 mill kWh reduction
- Pilots and testing
- Doors on cabinets
- Lighting concept
- CO2 as standard refrigerant:  
+ 40 stores with CO2



# The way forward – refrigerants and energy

## Energy program 2012-2017:

- **120 mill kWh energy reduction (target)**
- **+ 80 mill € investments** (incl. funding from public enterprise for renewable energy)
- **New and refurbished stores**
- ***Energy efficient equipment***
- ***Monitoring, maintenance, and follow-up***
- ***Close cooperation with service-providers***

## Natural refrigerants (CO<sub>2</sub>):

- **CO<sub>2</sub> (transcritical) standard**
- **Investment cost lower than conventional equipment**
- ***Improve integration with ventilation, heating and***
- ***Upgrade fans etc. on cabinets***
- ***Optimise energy use in stores with less recovered heat***
- ***CO<sub>2</sub> on plug-in cabinets***

# Challenges and obstacles - refrigerants

- **Environmental “cred”:**
  - Reduced emissions from natural refrigerants need to be appreciated; politically, economically, for reputation
- **More standardisation – less “tailor made”:**
  - Lower cost on machinery and refrigeration systems
  - Increased responsibility for suppliers
- **Closer cooperation with suppliers and service providers:**
  - Expertise and competence from suppliers must be used “for the good” of retailers other businesses
  - Retailers will increasingly rely on external services for monitoring and maintenance and **reduced energy cost**

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Thank you for your attention!

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