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# Cleaner Greener Coolers

## Carlsberg's introduction of Hydrocarbon Coolers in Denmark

Presenter:

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"Refrigerants, Naturally! - It Works" seminar at the 8th IIR Gustav-Lorentzen-Conference

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**Carlsberg today**

**Carlsberg joining  
Refrigerants naturally**

**Introduction of HC cooler in  
Denmark**

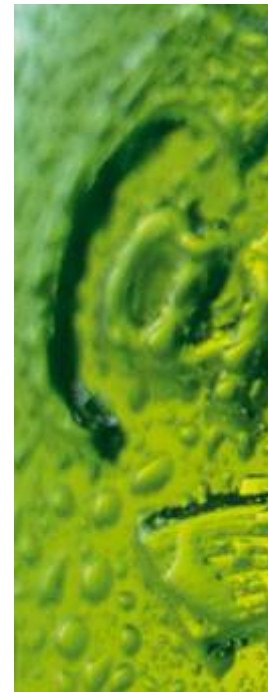
**Challenges and plans for  
the future**

**AGENDA**

# This is the Carlsberg Group today



- No. 1 in Northern Europe, no. 1 in Eastern Europe, no. 5 worldwide
- Unique portfolio of leading brands
- Sales in over 150 markets
- Production at 75 sites in +25 countries
- Over 40,000 employees
- Produced 115m hl of beer and 20m hl of other beverages in 2007



**Refrigerants,  
Naturally!**



# Enhanced Brand Portfolio



Grow complimentary brand portfolio adding premium brands with strong local positions and international potential

## Intl. Premium Brands



Refrigerants,  
Naturally!

## Local Power Brands



Etc...

## Specialty Brands



# Carlsberg Environmental Policy

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- We will continuously minimise adverse effects on the environment, and optimise the use of natural resources.
- We will protect and improve the environment in majority-owned subsidiaries. We will ensure that these subsidiaries, as a minimum, comply with all applicable local environmental legislation and regulations.
- We will systematically and continuously measure and improve our performance through an international recognised environmental management system, which will be supported by training and awareness programmes for relevant employees and by annual review of targets.
- We will prioritise environmentally investments in the planning, budgeting and implementation of our activities.
- We will implement Carlsberg Breweries' environmental strategy in joint ventures and in associated companies whenever possible.
- We will encourage partners and suppliers to operate in an environmentally acceptable way.
- We are dedicated to an open and unbiased dialogue about environmental issues with our stakeholders.



**Refrigerants,  
Naturally!**

# Carlsberg Environmental Position



<http://www.carlsberggroup.com>

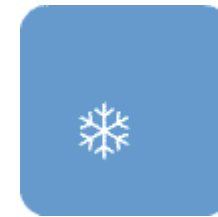
**Refrigerants,  
Naturally!**

# Carlsberg and Refrigerants Naturally!



- In April 2005 Carlsberg was approached by Greenpeace with a request for enhancing procurement of HFC free point-of-sale coolers.
- A cross organisational project group was established to assess the situation & suggest a way forward for Carlsberg.
- Participated in a field test with DTI and Vestfrost.
- Carlsberg joined Refrigerants Naturally! in the end of 2006.

**Refrigerants,  
Naturally!**



*Coca-Cola*



**Refrigerants,  
Naturally!**

## Carlsberg position on HFC-free cooling

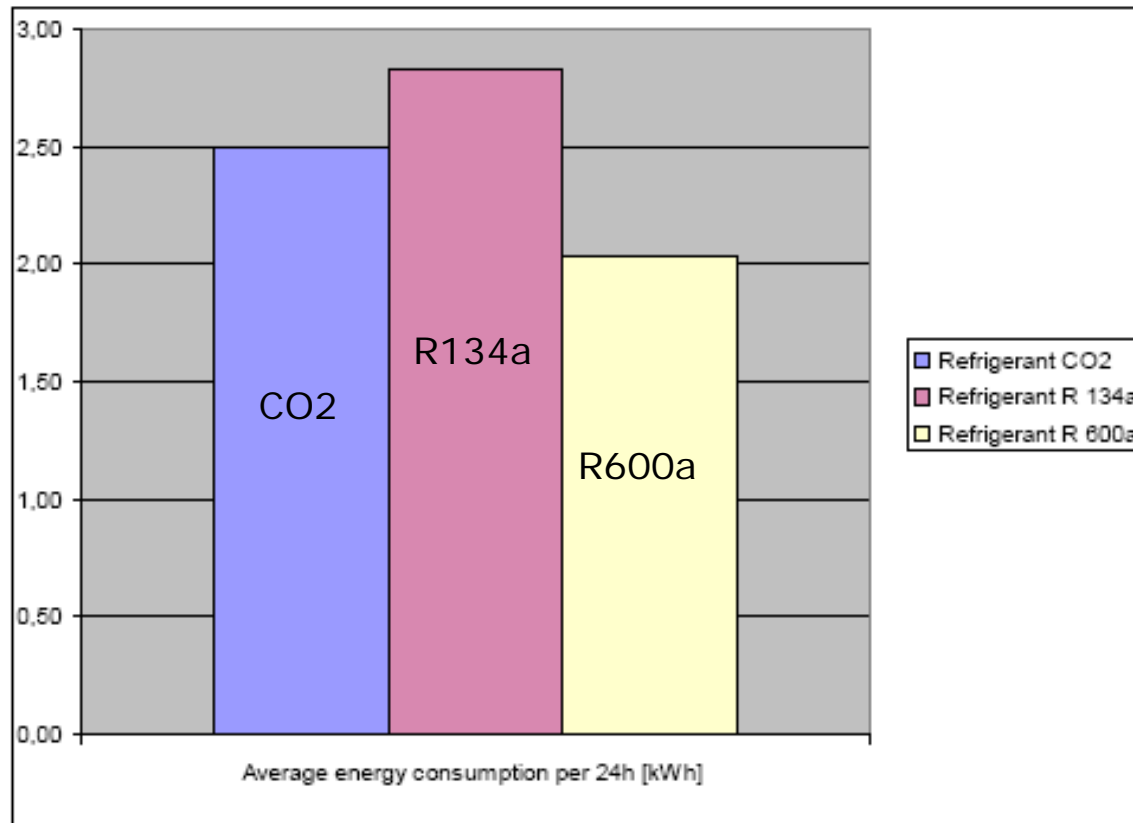
- Carlsberg will start to phase out the use of HFC in POS cooling cabinets all over the world when ever it is feasible.
- Starting in Scandinavia, where a service and maintenance setup for HC commercial cooling cabinets already is in place, and where focus on energy consumption is high.
- Pilot trial in 2007, with up to 1000 HC coolers.
- HC and CO2 are possible technologies in a HFC-free future.



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# Field test with DTI and Vestfrost.



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Naturally!**

# Introduction of Hydrocarbon Coolers in Denmark

- Status September 2008.
- HC coolers are now introduced both into our off trade and on trade sales channels.
- Service and maintenance is outsourced to a certified supplier.
- So far no problems reported
- 100% of DK purchase of beer coolers “one door high” is now HC coolers
- By the end of 2008 we will have +1100 HC coolers on the market .



# Introduction of Hydrocarbon Coolers in Denmark



**Refrigerants,  
Naturally!**

# Introduction of Hydrocarbon Coolers in Denmark



**Refrigerants,  
Naturally!**



# Challenges of introducing HC coolers

- It sounds easy to, but a lot of hurdles have to be overcome both internally and externally in order to change to Hydrocarbon coolers.
  - Huge complexity in our own fleet of POS coolers.
  - Market trend in the Nordic countries is towards bigger coolers and speciality coolers.
  - Still only a few suppliers offer commercial HC coolers within our current supplier base.
    - We now use Vestfrost and Helkama.
  - Service setup has to be in place.
  - Internally, education/explanation of the benefits of using HFC-free cooling in POS is needed for success.



# Next steps for Carlsberg

- All purchases in Denmark of “one door high” beer coolers will be HFC-free.
- Reduce the energy consumption further in our POS coolers.
  - Trials with LED light.
- Cooperate with our suppliers in the development of new HFC-free POS equipment.
- Introduce HFC-free coolers in the other Scandinavian countries in the coming years.



**Refrigerants,  
Naturally!**

**Thank you.**

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