



Miljøministeriet  
Miljøstyrelsen

# Tools and trends in HFC regulation

## A Danish Perspective

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# Introduction

Trends in uses and emissions

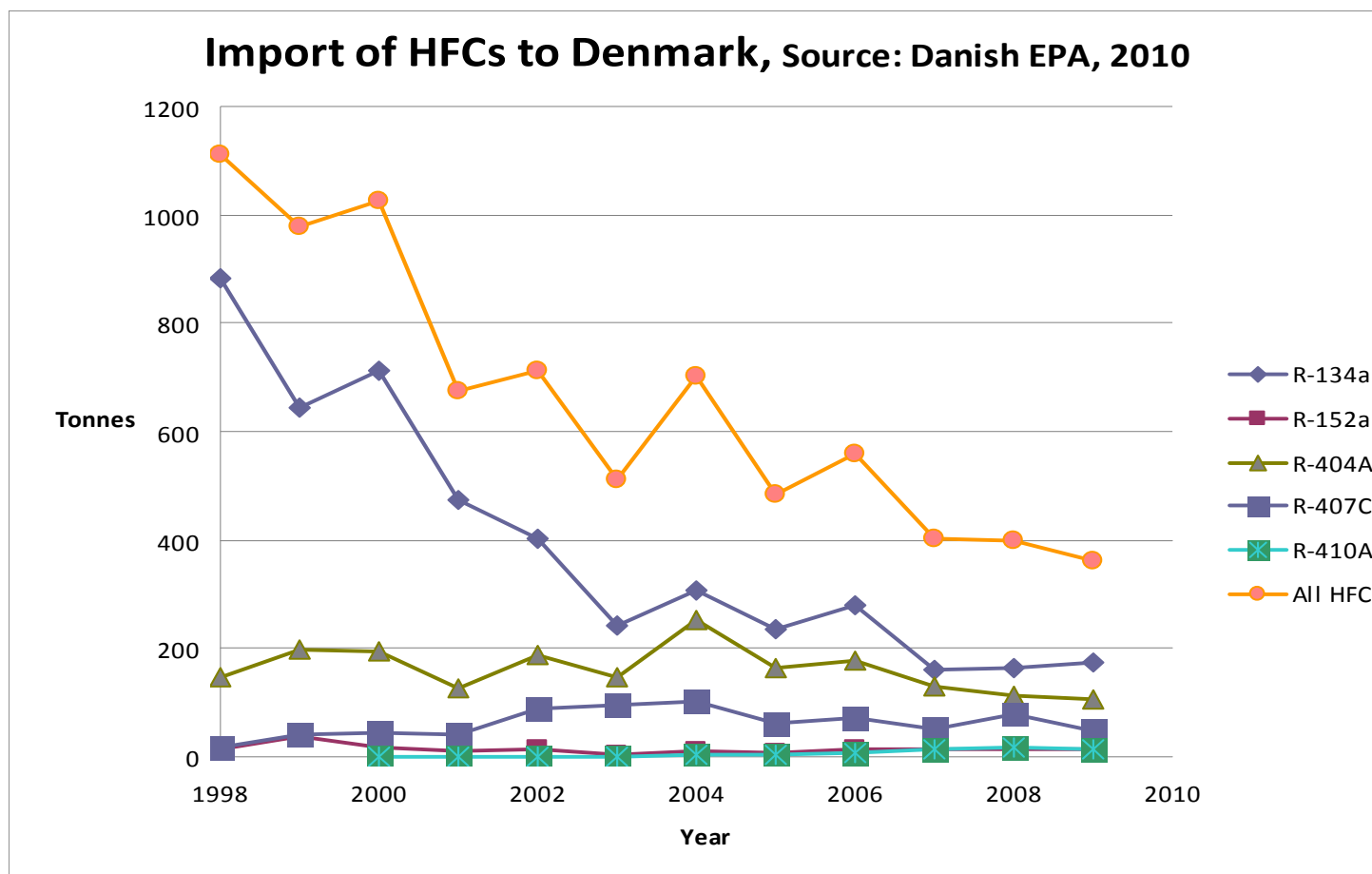
The Toolbox

Lessons learned

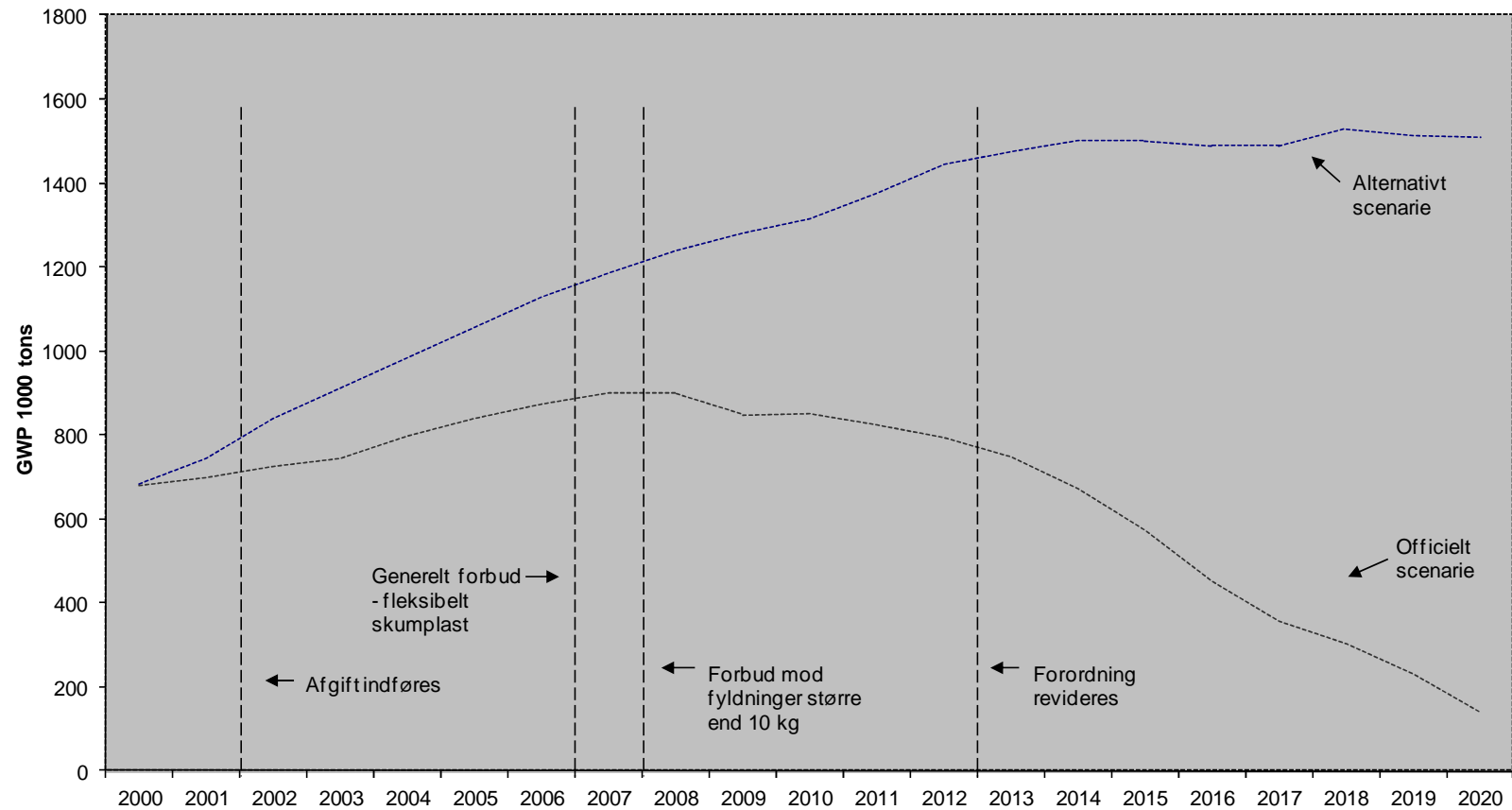


**Danish Ministry of the Environment**  
Environmental Protection Agency

# The trends #1



# The Trends # 2



# The Tools



- Taxation
- Use Bans
- Support to Development of alternative technologies
- Containment?



# Taxation

- 150 Dkr  $\approx$  20 € per T CO<sub>2</sub> Equivalent
- R 134 A  $\approx$  28 € per kg
- R152A  $\approx$  2 € per kg
- Max at 80 € per kg
- Substances in bulk and contained in mixtures and products



# Statutory order no. 552

- All uses of *all* HFCs are banned (2007)
- Some permanent derogations: 150 g - 10 kg
- Servicing allowed
- DEPA can grant individual exemptions



# Supporting Alternatives



- Development of equipment - projects for 50 mio. Dkr
- HFC- free knowledge centre
- Increase in education capacity
- KMO (Refrigeration industry environmental agreement)





# Main Alternatives

- Supermarkets: CO<sub>2</sub>
- Commercial plug-in cabinets: Hydrocarbons
- Industrial refrigeration: Ammonia
- Chillers: Hydrocarbons and Ammonia, (Water)
- Domestic refrigerators and freezers: Hydrocarbons





What's so special about Denmark?

Nothing?

Safe, efficient and economically viable alternatives are available for most applications and conditions

