



10 years of experience in selling alternative fuels – future challenges and visions  
Synbios, Stockholm 18 May 2005  
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# About OKQ8....



- 28 % market share, gasoline
- 70 % market share, ethanol, E85
- 1 100 outlets
- 4 000 employees



# Why is an "oil company" interested in selling biofuels?



Long term survival

Brand

"En rejäl mack" "A reliable station"

Customer expectations

Owner expectations



# A peek at history



Unleaded gasoline – 1985  
(1992 – all lead removed)

First ethanol (E85) pump opens – 1994

10 % ethanol in gasoline – 1997  
Discontinued 99/00

First biogas station opens – 1998

5 % ethanol in all gasoline\* in the greater  
Stockholm area – 2001

5 % ethanol in all gasoline\* from OKQ8 –  
2003

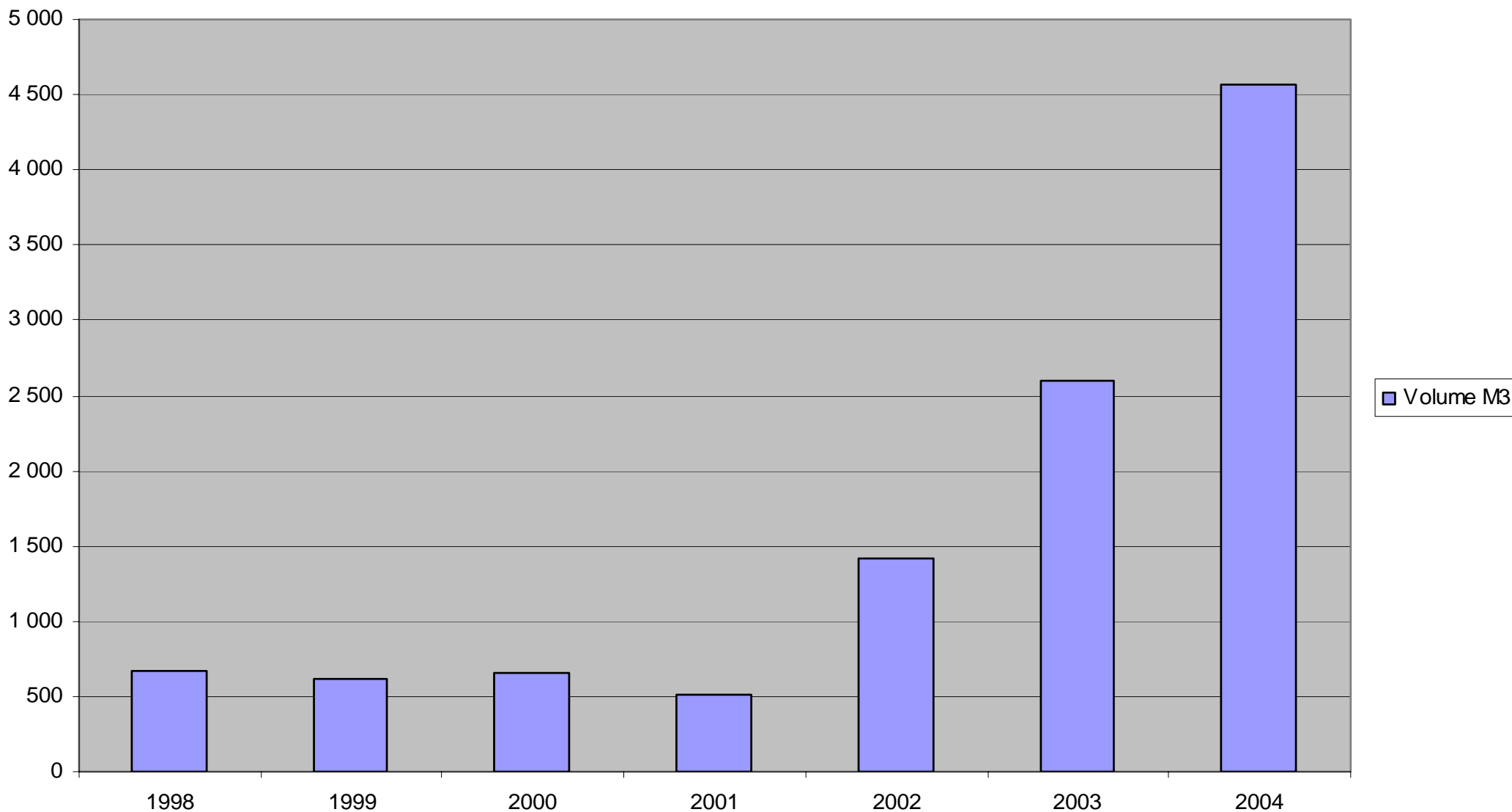
5 % ethanol in all gasoline\* in Sweden -  
2004

\*All 95-octan

OK-Q8 AB 2005-05-25



# OKQ8 Sales of ethanol, E85 for use in flexi-fuel vehicles



# Biofuels – where can you fill up?

~160 stations with ethanol (E85 )

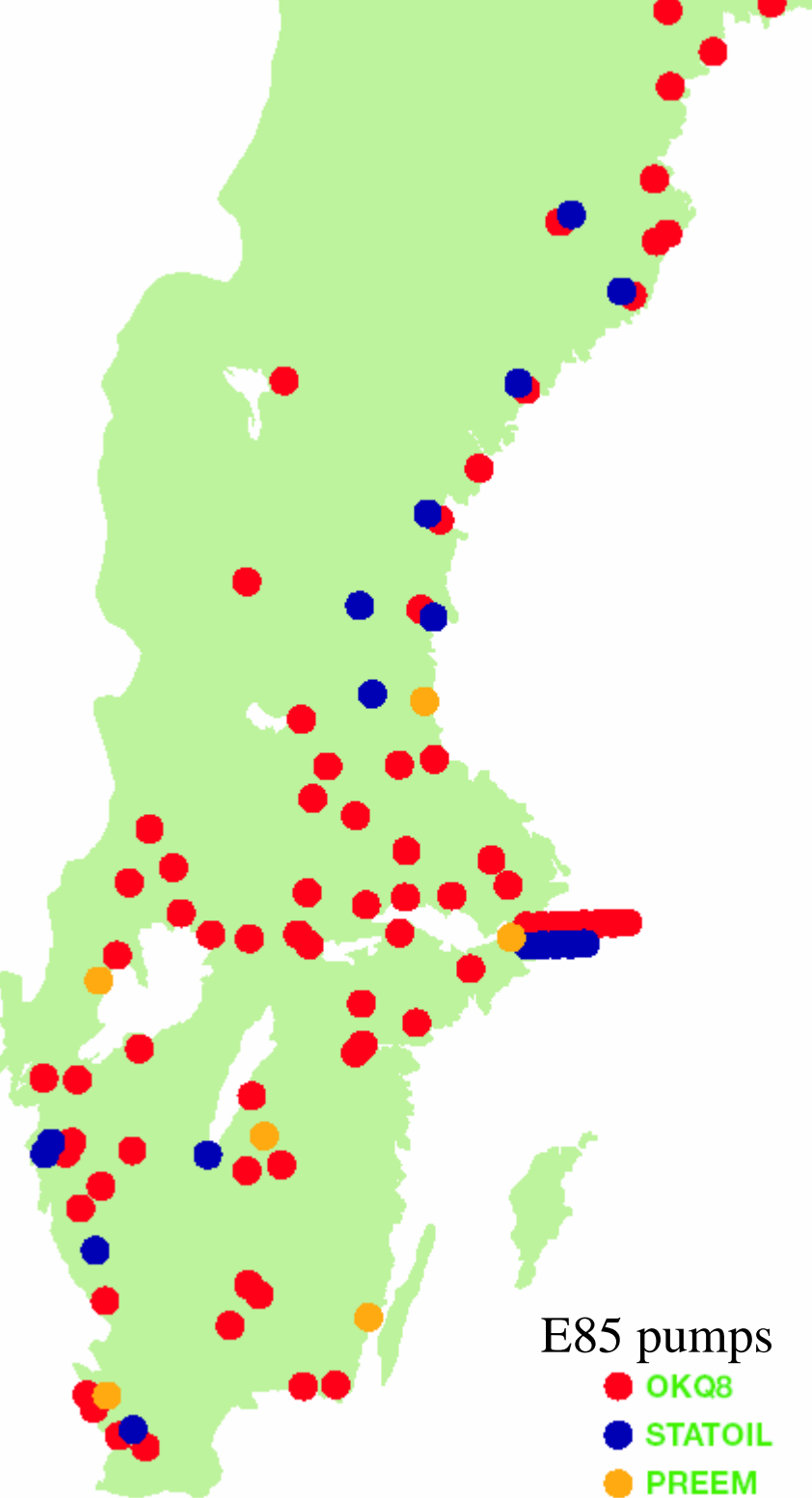
21 stations with FAME

49 stations Biogas/CNG

~4000 (ALL) stations with 5 % ethanol in gasoline

2 % FAME in diesel available for heavy vehicles (farmers & business)

*Fast development in the number of ethanol pumps*



# Carrots for biofuel vehicles

Free parking

No congestion charges

Lower tax

Ethanol and biogas/CNG fuel cheaper than gasoline for the consumer! (no energy or CO2 tax)



# Vehicles for biofuel?



- SAAB 9-5
- Volvo S40 och V70
- Ford C-Max
- Ford Focus 1.8
- 8 models of CNG light vehicles

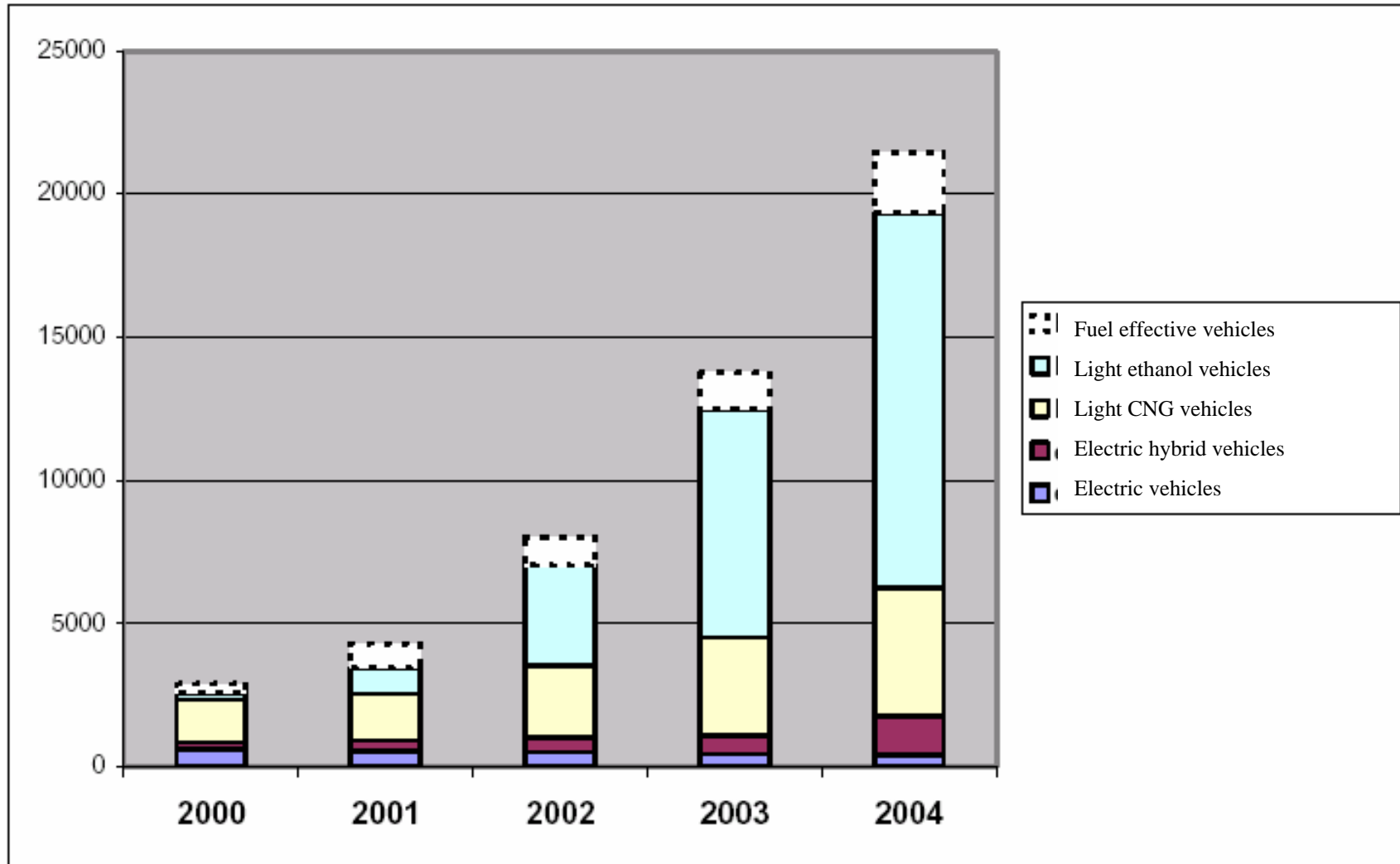
~14 000 light ethanol vehicles  
~4 500 light CNG vehicles



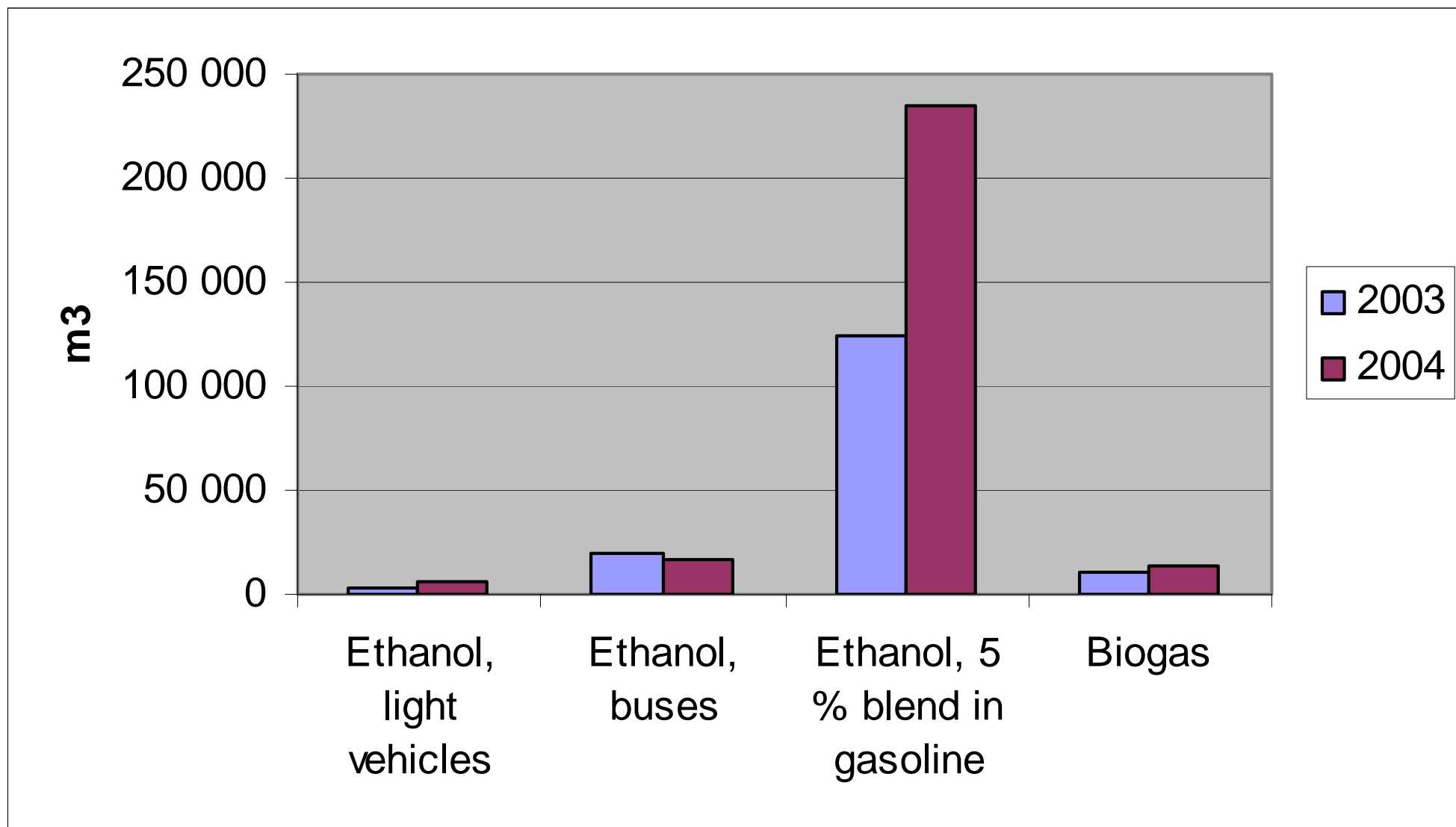
~1100 buses and heavy  
vehicles (ethanol & CNG)



# Light alternative fuel vehicles



# Biofuel for vehicles in Sweden





# Sales Sweden 2004, summary

(m3)

Gasoline	5 322 000
Diesel	4 073 000
Ethanol, low blend in gasoline	235 000
FAME, low blend in diesel	8 600
Ethanol, E85	5 500
Ethanol, bus	20 000
FAME, (as RME)	700
Biogas* equivalents	13 000

\* All incl. low blend in CNG

Source: SPI

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# Biofuel Sources - Sweden

## ETHANOL

### Sweden

Barley & Wheat 50 000 m<sup>3</sup>

Sulfite pulp 13 000 m<sup>3</sup>

### Brazil

Sugarcane 150 000 m<sup>3</sup>

### Southern Europe

Wine production 100 000 m<sup>3</sup>

## BIOGAS

Wastewater treatment plants

Sanitary Landfills

Slaughterhouse waste





# Alcohol in the soup!

65 000 m<sup>3</sup>  
as 5 % blend

5% ethanol in gasoline  
Reduces the CO<sub>2</sub>  
emissions



OK Q8

OK-Q8 AB





# How did we do it?



Possible through state  
subsidies/tax reduction

According to existing gasoline  
standard

Progressive leadership

Hard work!

- Supply negotiations

- Terminal modifications

- Station modifications



# 10 years experience

Technically no difficulties in selling ethanol or biogas

Low blend of biofuels fastest way to volume

Lack of long term political decisions harm development

People hesitant to try new technology

- 10 years after first E85 pump – 0,04 % of market on energy basis
- approx. 0,5 % of all light vehicles are possible to run on biofuel (approx 2,7 % of new sales 2004)

# What's in the near future?



- Sweden will reach the 3 % national target set for 2005 (EU Biofuels Directive)
  - To reach the target of 5,75 % biofuels in 2010 requires:
    - an increase in number of fuel flexible vehicles
    - an increase in the number of filling stations selling biofuels
- not enough....
- change in gasoline standards; allow 10 % ethanol in gasoline
  - 5 % FAME in diesel – Swedish regulatory change necessary



# What then...?

What will be the "second generation biofuels"?

To reach the second generation you have to pass the first generation (ethanol)

We can handle the choices – it is a question of logistics  
- easier and less expensive with liquids!



Great uncertainty of  
future choices...

...we nevertheless  
believe that we have to  
be part of creating the  
solution....and that we  
do not have time to wait  
for the perfect solution...