



Country report - Sweden - April 2006

Institutional framework

- Compulsary to provide biofuels at filling stations
- CO₂-tax is removed July 2007
- 200 M€ for new Climate investment program
- 11,3 TWh green electricity in 2005, 76% from biofuels, system prolonged until 2030
- Agreement on certification system for GHG-emissions from biogas plants
- Testing for mad cow disease under development
- 87% of all biofuels was ethanol, 6% biogas and NG
- 15% of all new cars are Eco-cars
- Reduced tax on biogas cars in October 2006 (30%)

Government policy on Environmental Targets - April 2006

- 25% of all new governmental cars should be Eco friendly 2005. 35% in 2006. 75% of all new cars.
- National action plan for adaption of the public tendering process (more environmentally oriented)
- Biogas in transport sector can contribute by 10% to the national GHG targets in 2010
- Governmental commission for reduction of oil dependancy
- 4% reduction of GHG before 2010 within reach

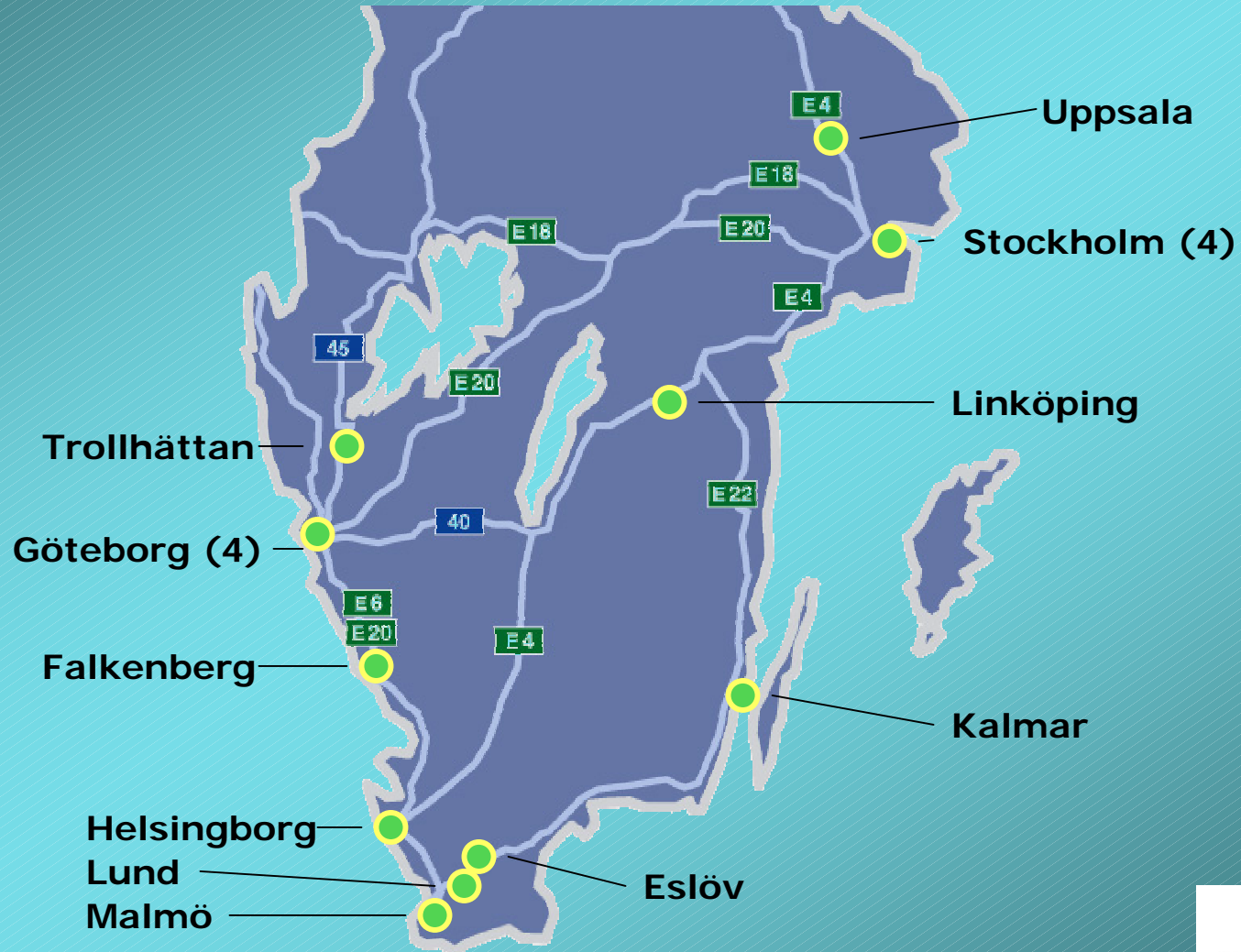
R & D

- **Counter measures to biological growth in upgrading plants**
- **SNG-production from solid biomass**
- **Analysis of methane emissions from post treatment of digestate**
- **Study on new upgrading technologies**
- **Optimisation of gas production from sewage sludge**
- **Internal methane enrichment**
- **Ecological lung for upgrading of biogas**
- **System studies**

Other

- **Nordic biogas conference in Helsinki, 150 participants**
- **Visit by BINGO-project in January**

1999



2006



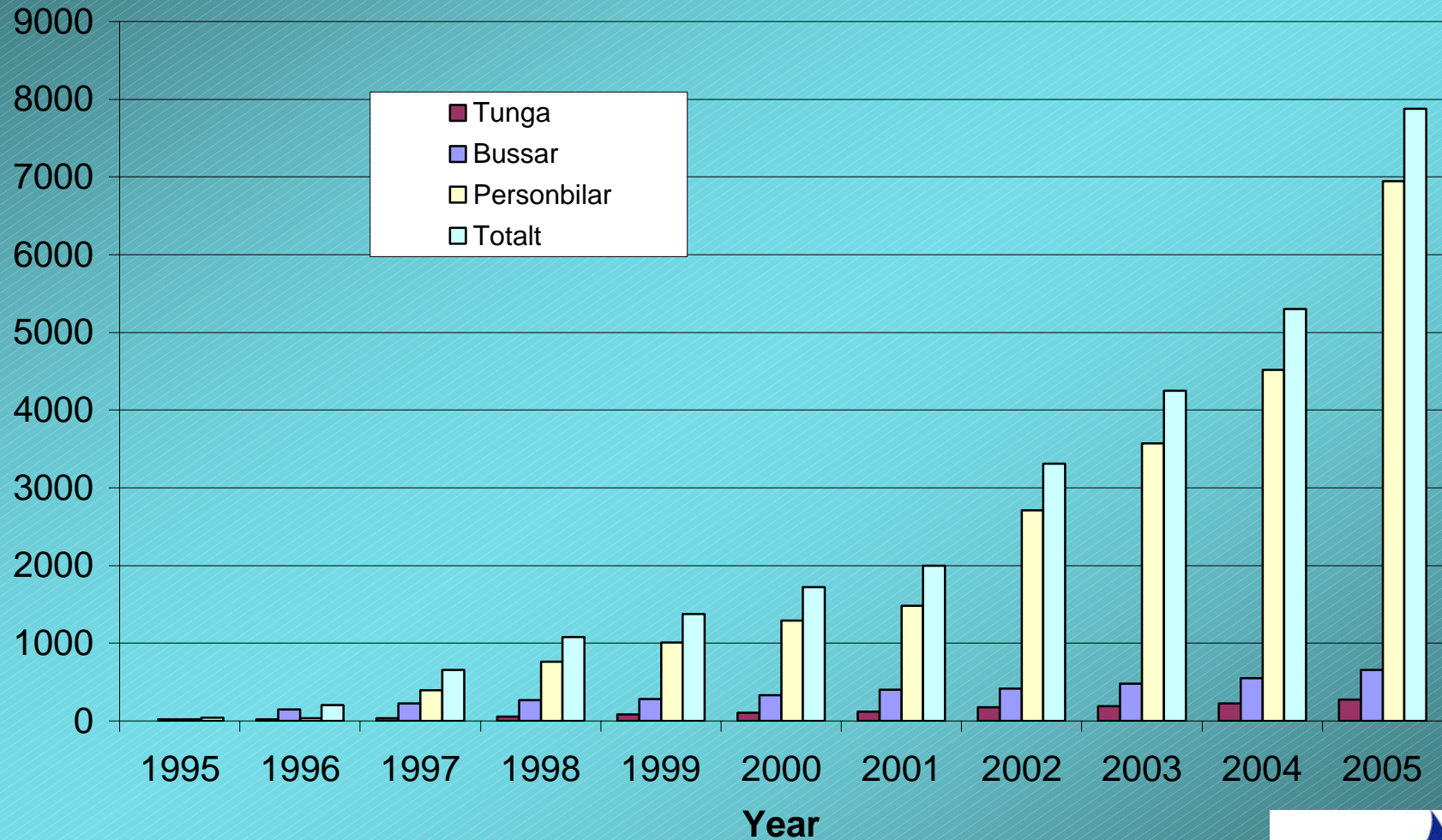
Under construction: Boden, Skellefteå och Östersund

Development of gas vehicle market

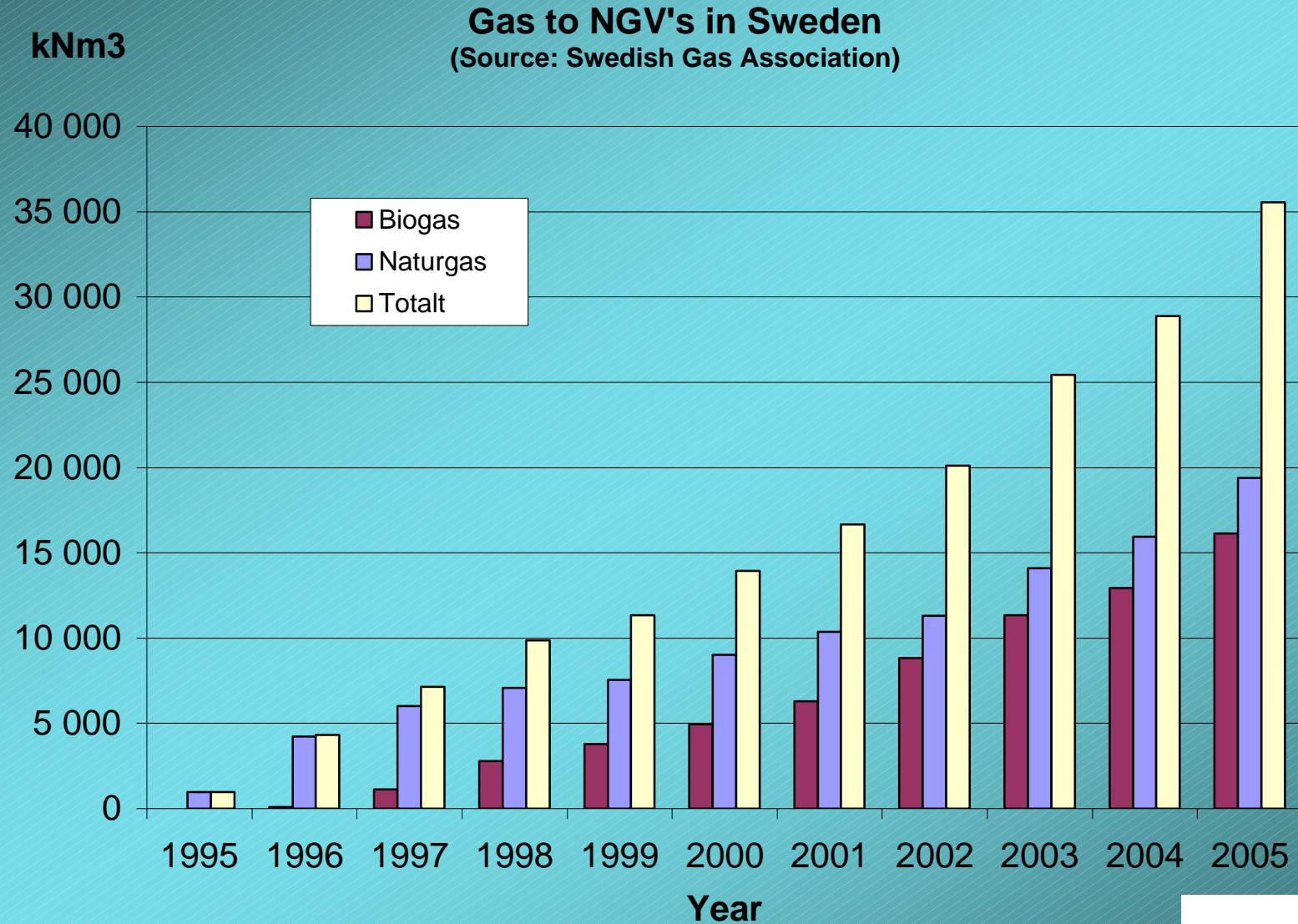
NGV's in Sweden

(Source: Swedish Gas Association)

Number



Development of market for CNG/CBG



Selected news from SE biogas plants

- **Kristianstad** - New upgrading plant 2005 - 1,8 M€ - 600 m³/h, mobile filling station, farmscale biogas/upgrading, covered manure pits
- **Gothenburg** - new upgrading plant 2005 - 1400 m³/h - CIRMAC - injection into MP grid - ready dec 2006
- **E.ON** - 20% biogas in fuel to NGV's, 2 Mm³ to Malmö gasgrid in 2007, 50% biogas in vehicle fuel 2010, production plant in Bjuv under construction (25 GWh/year), studies about biogas production in closed sugar factory
- **Trollhättan** - new plant for plants studied

Selected news from SE biogas plants

- Helsingborg - Expanded capacity - 60 000 tpy, 5 Mm³/year, 61 buses on biogas
- Laholm - upgrading plant reconstructed (water scrubber)
- Skellefteå - new upgrading plant (sewage)
- Norrköping - new biogas plant with raw material from ethanol plant
- Jönköping - co-digestion of OFMSW planned
- Östersund - new upgrading plant
- Stockholm - 20 new garbage trucks on biogas, large scale biogas production (100 GWh/ year) investigated by JTI

Relevant Q's

- **Transport costs - documentation of transport**
- **Possibilities to spread digestate**
- **European certification system for digestate**
- **Technologies for spreading of wet digestate**
- **Pretreatment of MSW**
- **Characterisation - digestion properties**
- **Hygienisation – alternative technologies**
- **Methodes for disinfection of transport vehicles**
- **Data on utilisation of digestate**
- **N₂O from waste treatment**