

E.ON Gas operational areas

Gas lines



Vehicle gas

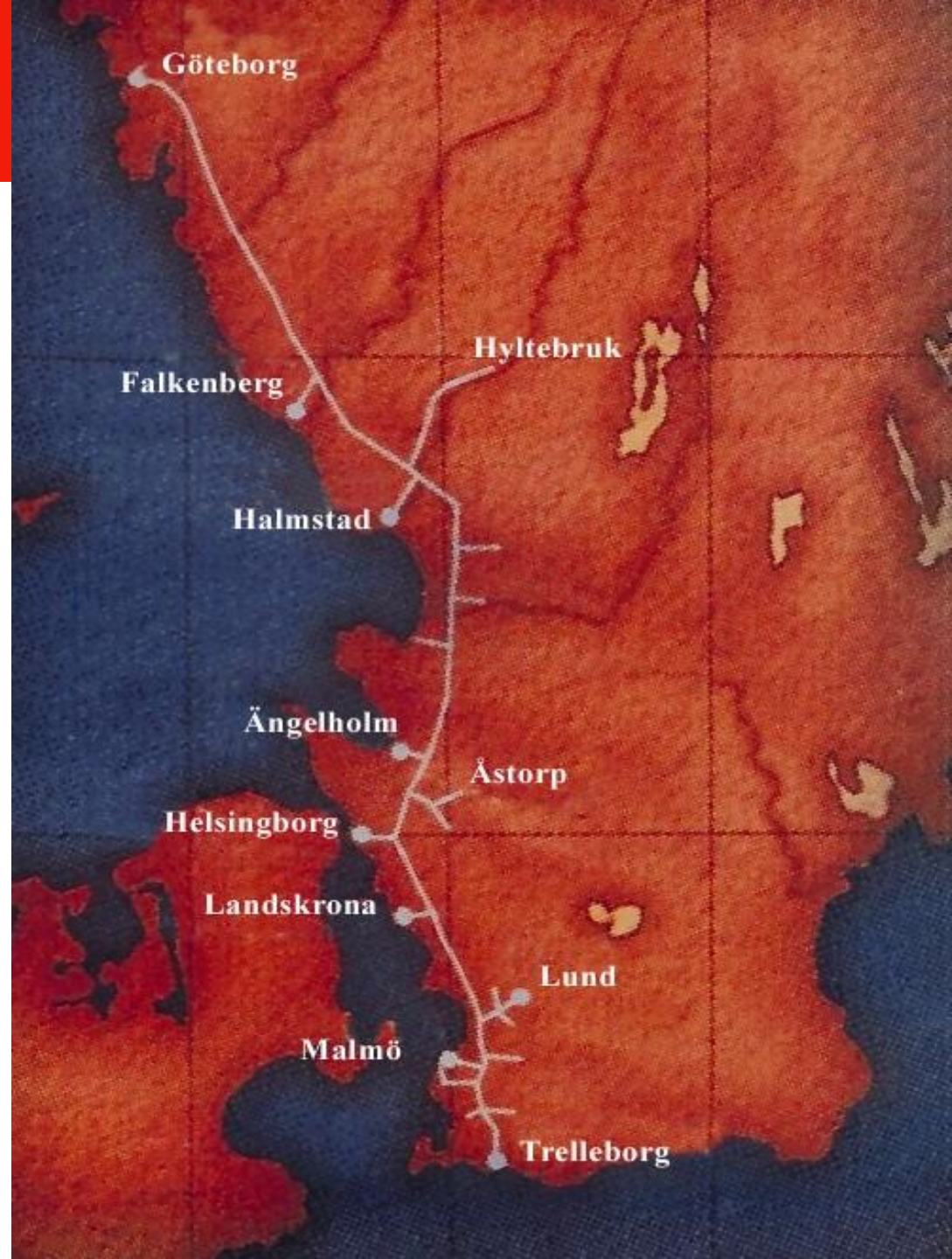


LPG

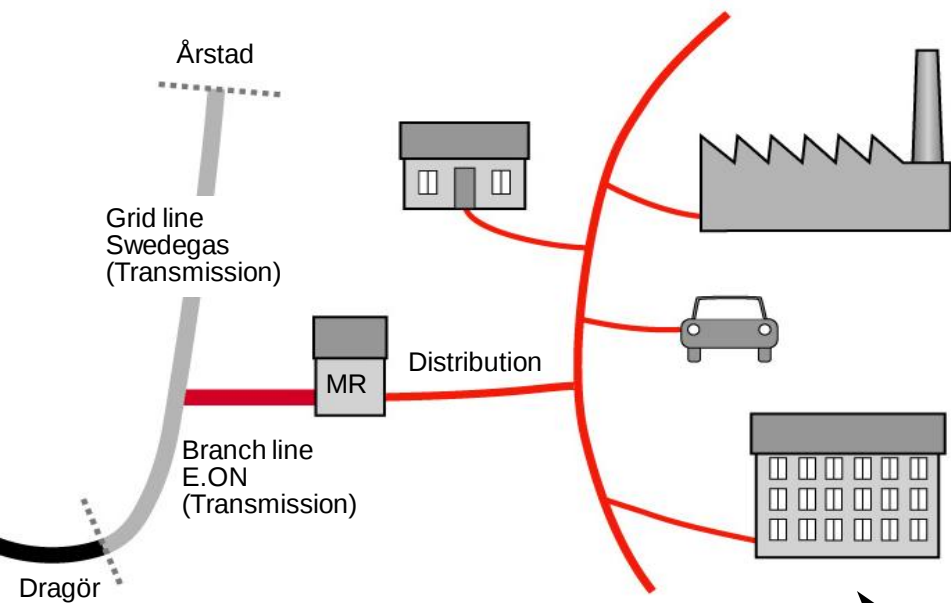


E.ON Gas Sweden

**Gasdistribution
in the south
of Sweden - a small
part of the country**



E.ON's transmissions and distribution network



- E.ON transports around 9 TWh energy gas over one year.
- Our grid is 1,800 km long.
- 33 measuring and control stations.
- Gas storage in Halmstad holds 10 million m³ of energy gas.



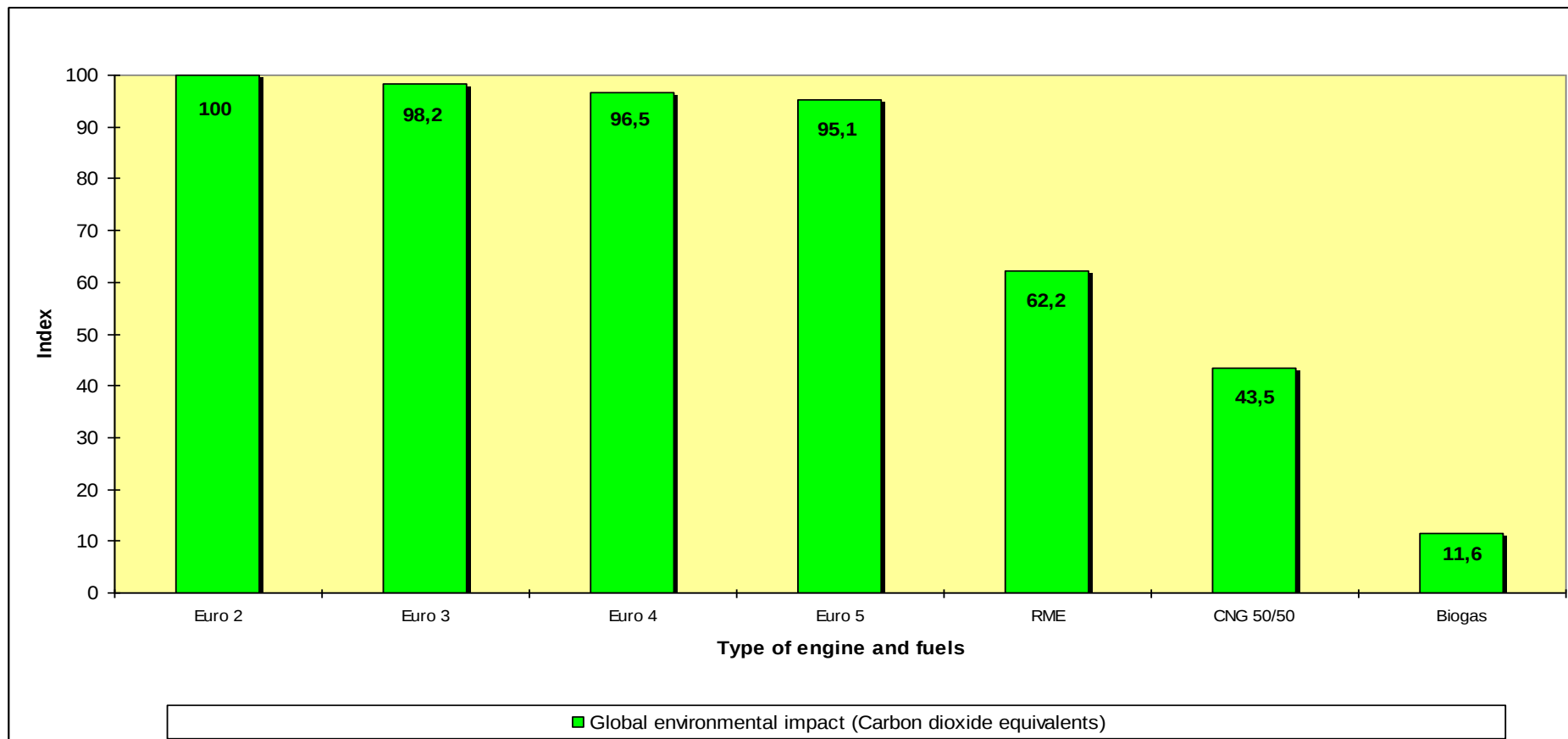
We emit too much carbon dioxide, so the EU has formulated the following climate objectives

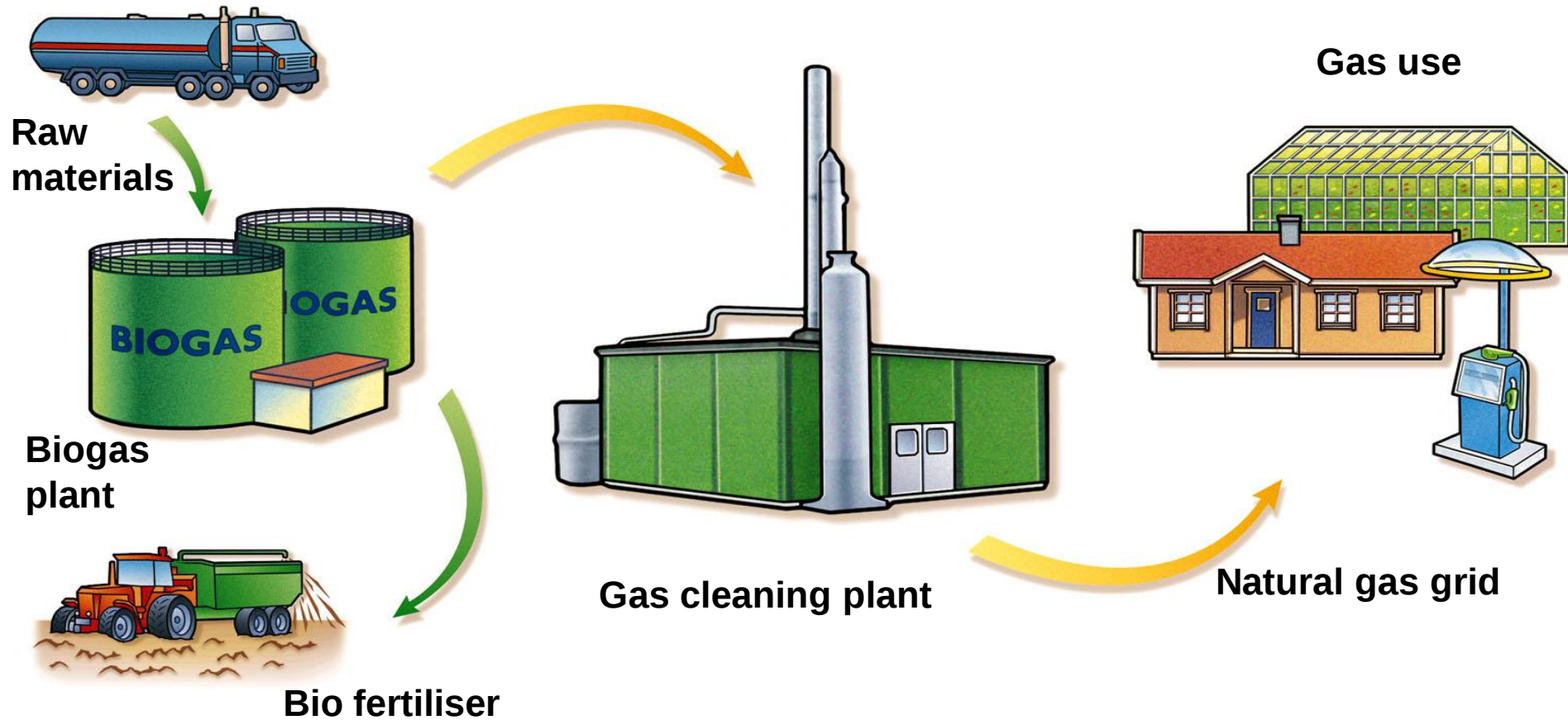
- To reduce carbon dioxide emissions by 20% by 2020
- To increase the efficiency of energy use by 20% by 2020
- To increase the proportion of renewable energy to 20% by 2020



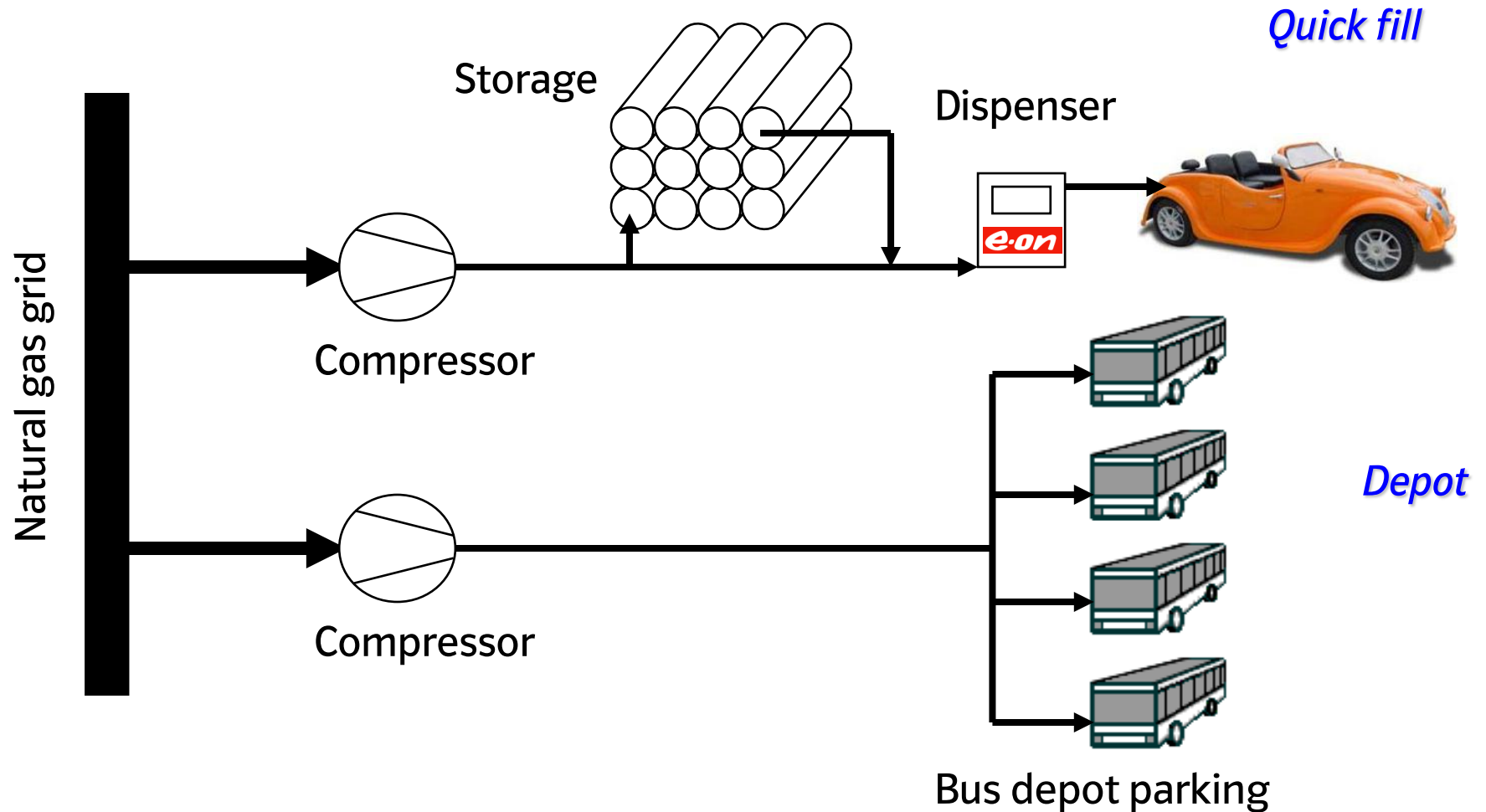
In other words, we are facing a **real** challenge

Global environmental impact

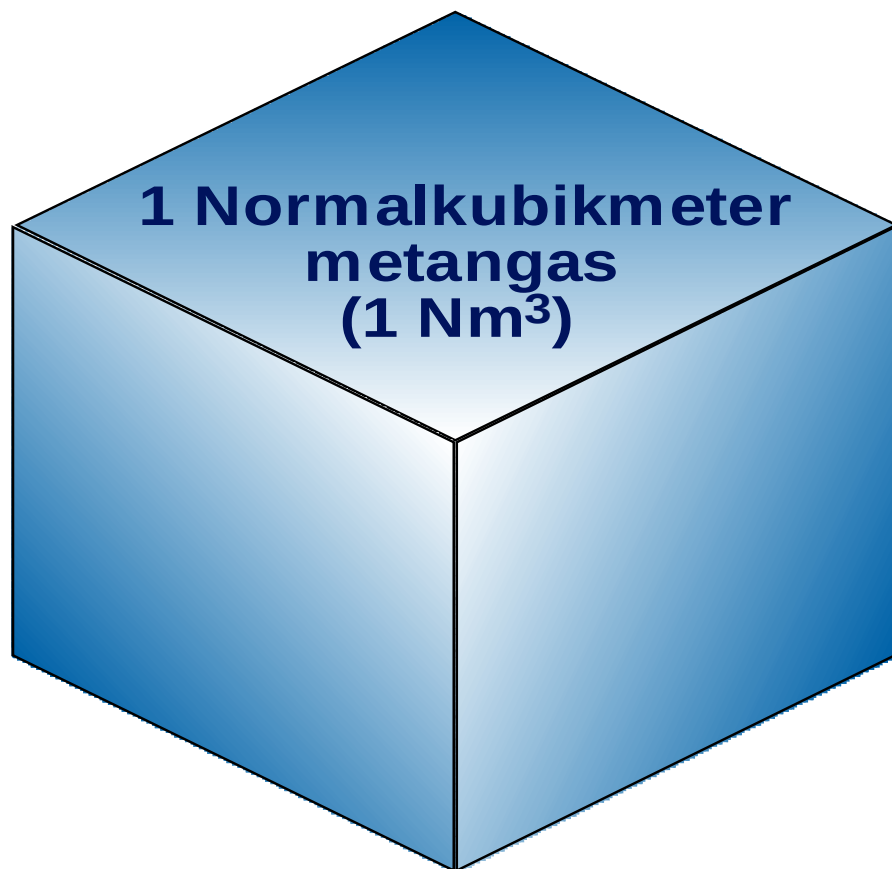




Filling station for biogas/natural gas



Samma energiinnehåll men olika volym



1 liter dieselolja



**5 liter komprimerad metangas
(vid 200 bar)**



Photo by Peter Cao

Var sitter gastankarna?







Public filling station for biogas/natural gas



E.ON product branding

Biogas 50

50 % biogas

Biogas 100

100 % biogas

e-on

123-4321

5678

Fordonsgas
- ett renare drivmedel

Biogas in Sweden – today and tomorrow

- Biogas is used throughout Sweden
Production is about 1.5 TWh, which corresponds to 10% of the country's natural gas use.
- The potential for digested biogas: 15 TWh
- The potential for gasified biogas: 59 TWh



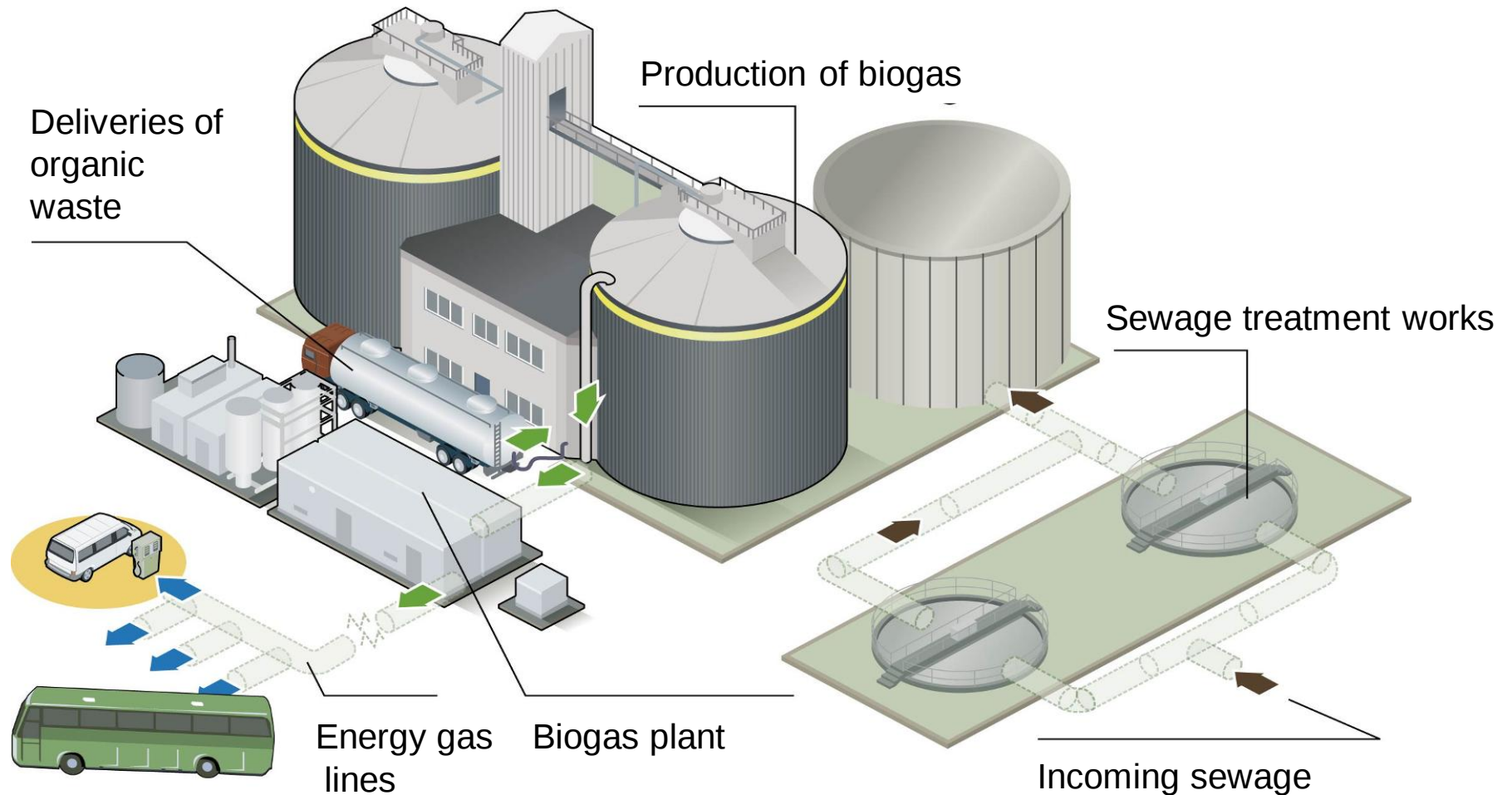
An effective producer of fuel



Biogas production...

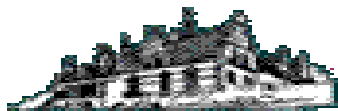


Sjölunda – 2 million liters of gasoline





Wrams - Centra för miljövänlig energi, jordbruks och livsmedelsproduktion



Wrams Gunnarstorp



Findus

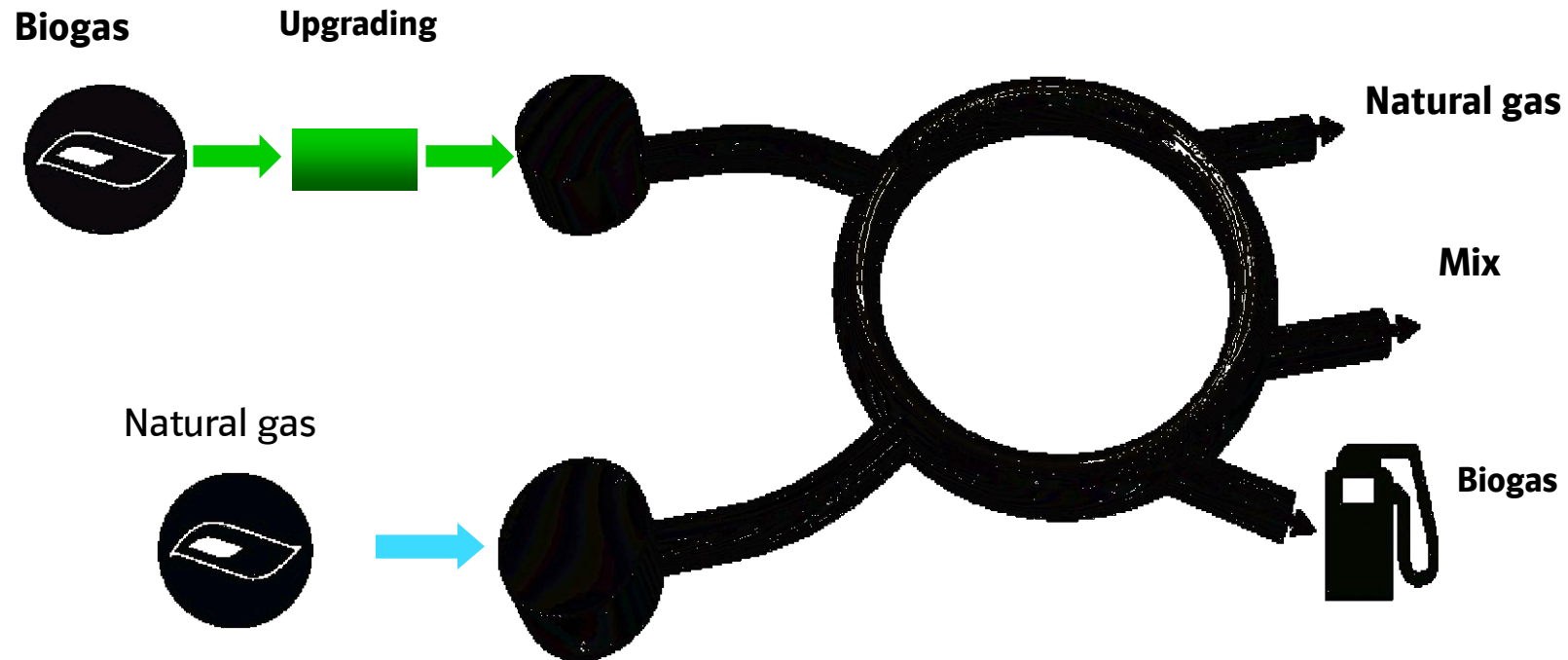


Dalsjöfors



LUNDS UNIVERSITET

Biogas and natural gas i the same grid



The "*green gas principle*" means that biogas can be offered at all filling stations

Access to biogas in Sweden

Current

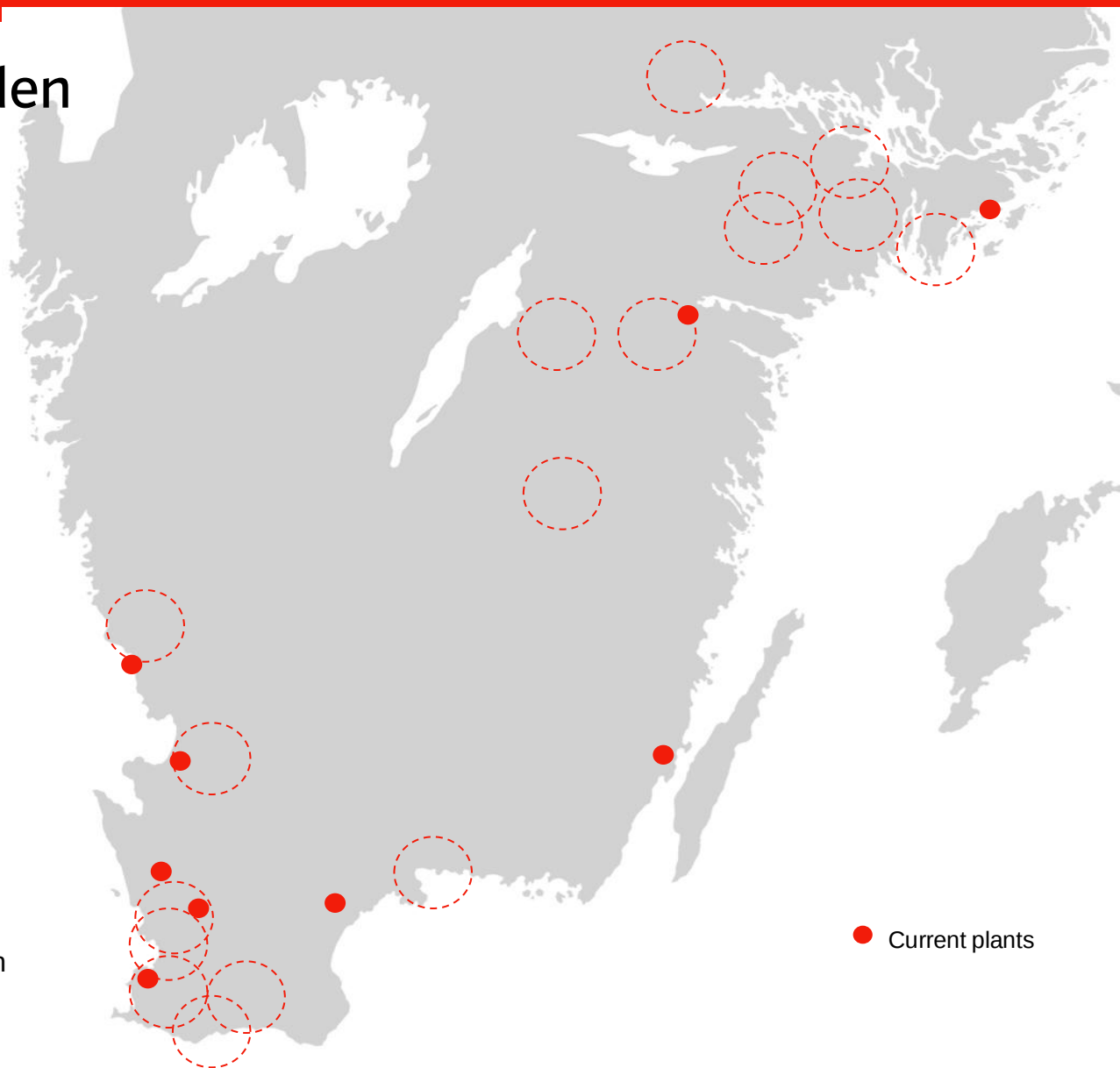
- Laholm	25 GWh
- Norrköping	10 GWh
- Kristianstad	20 GWh
- Eslöv	5 GWh
- Bjuv	25 GWh
- Sjölanda	25 GWh
- Kalmar	10 GWh
- Falkenberg	40 GWh
- Grödinge	20 GWh

Total 180 GWh

E.ON is overseeing the situation in about 15 projects, with a total of 400 GWh in southern Sweden.

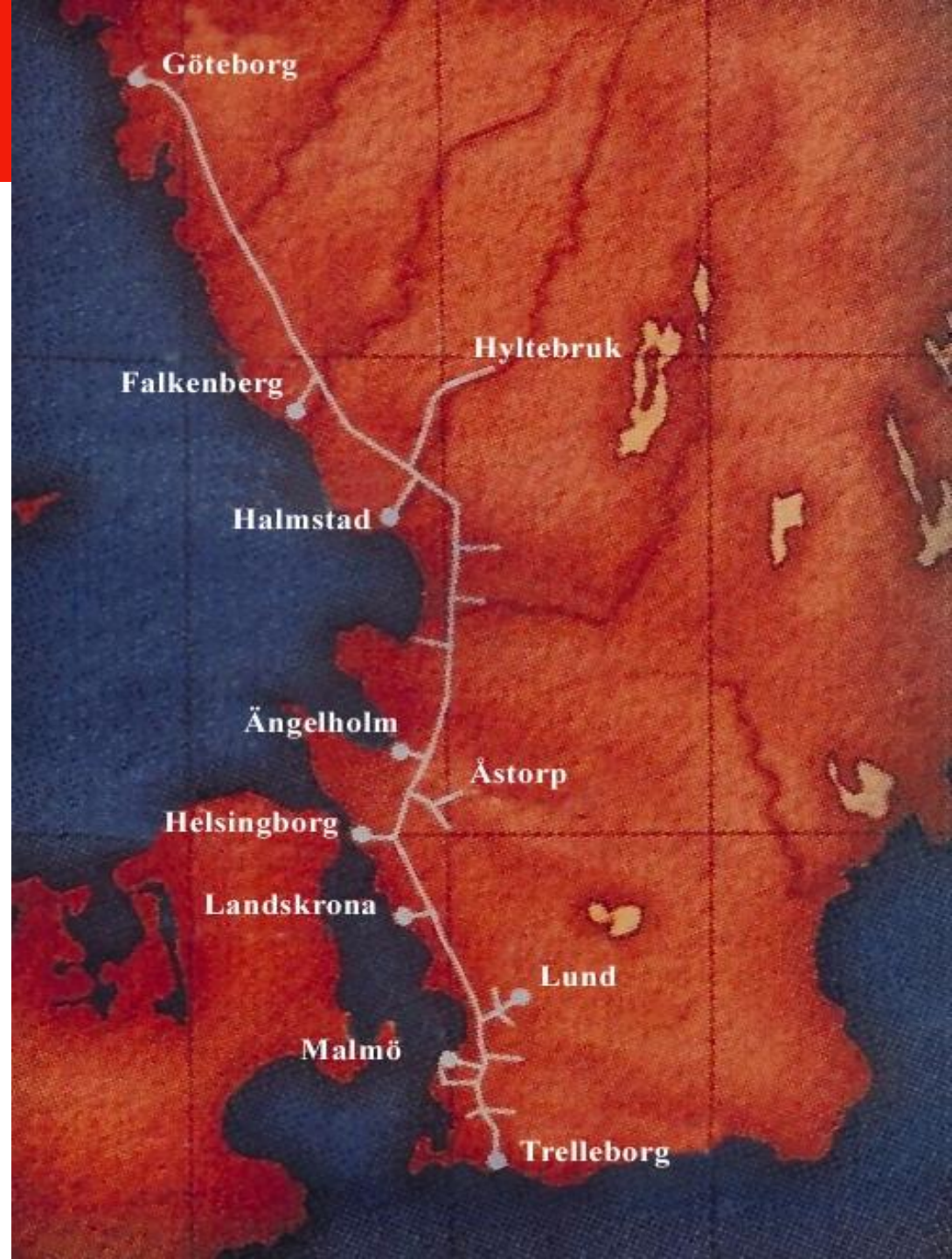
E.ON is also looking at the possibility of building two gasification plants:

GoBiGas - 30 GWh and E.ON's own - 1.5 TWh



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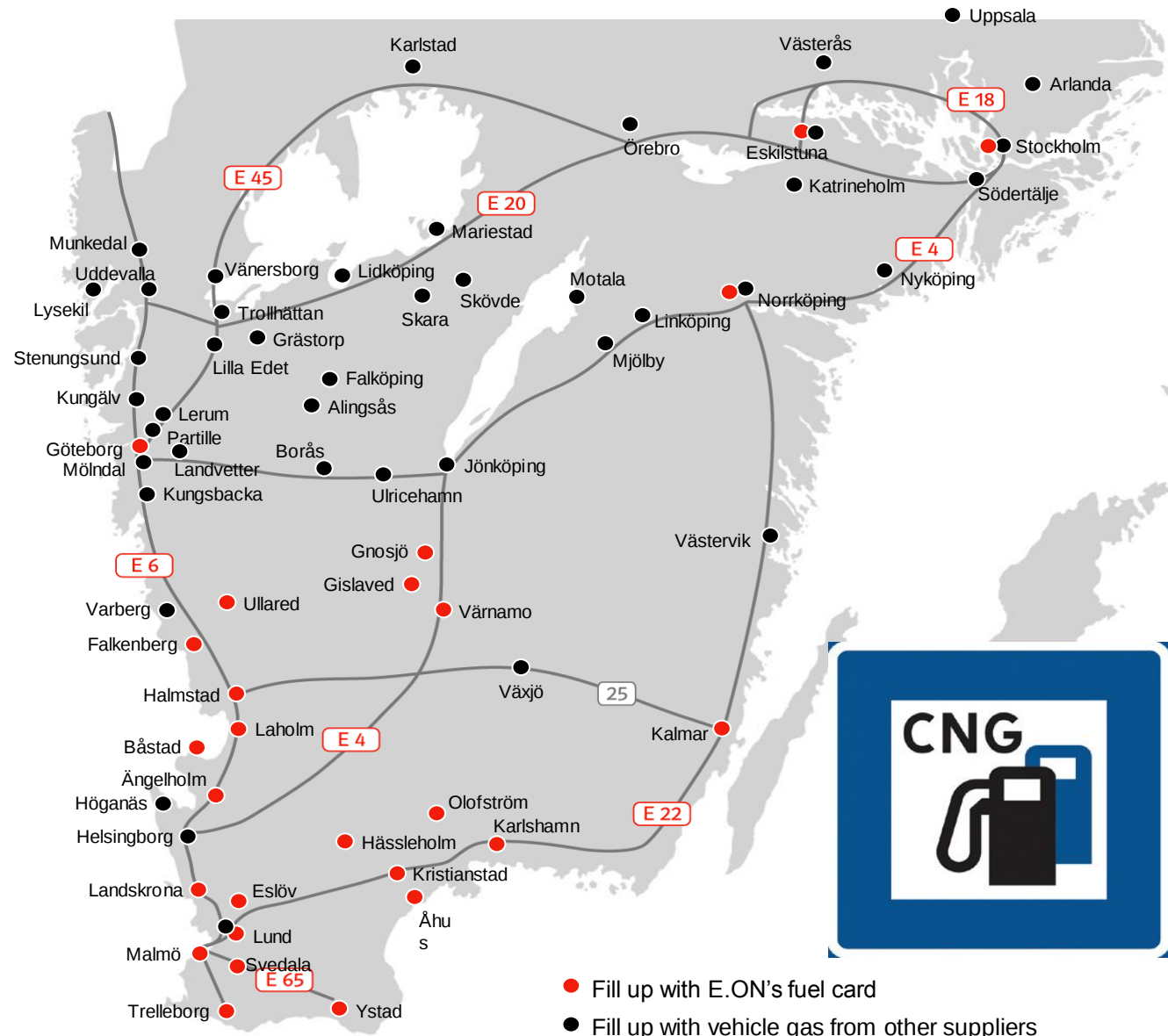


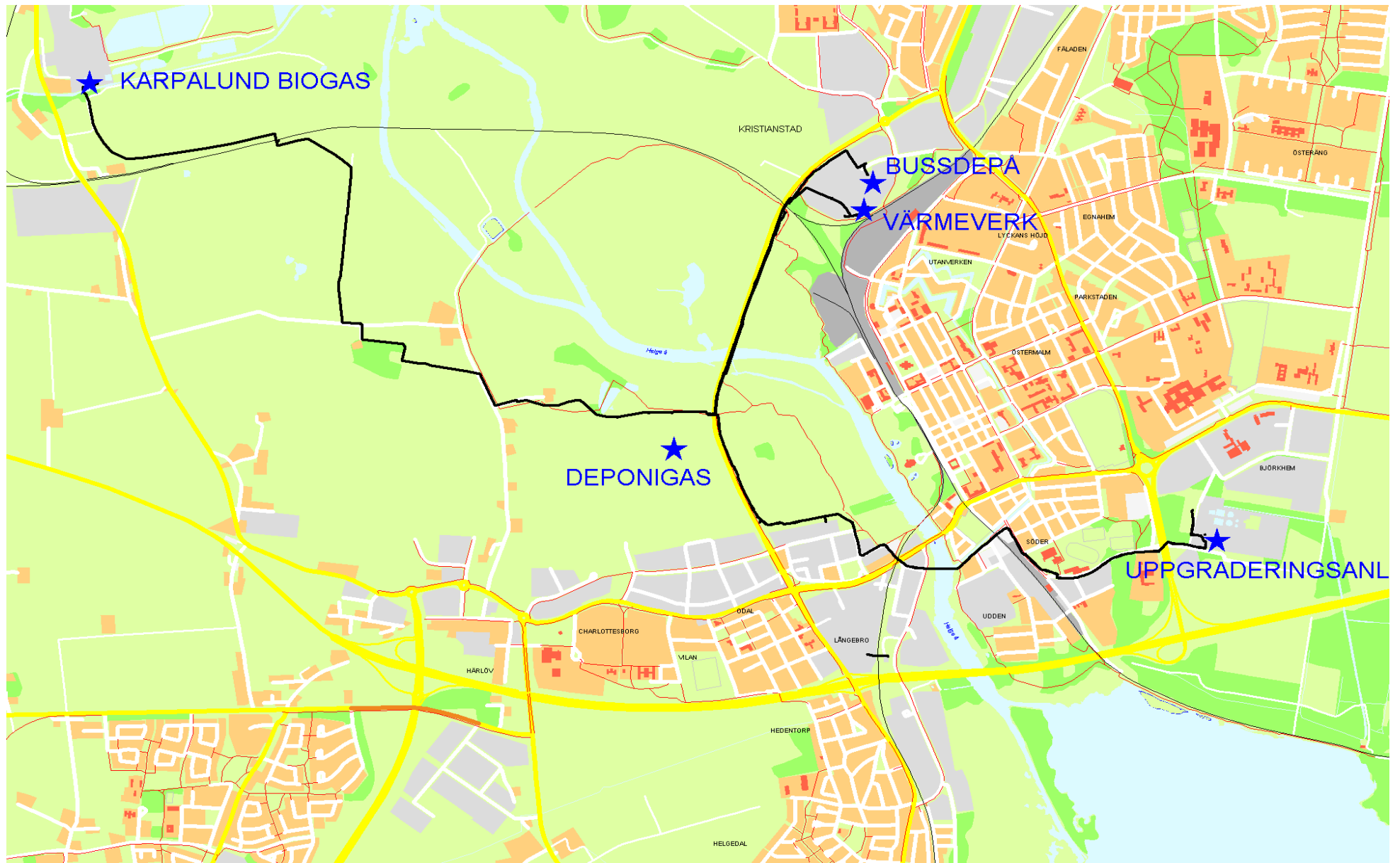
Vehicle gas filling stations

Filling stations in the north

- Östersund
- Boden
- Sundsvall
- Skellefteå

120 public filling stations
50 depots for heavy traffic
30,000 private cars
950 buses
350 trucks



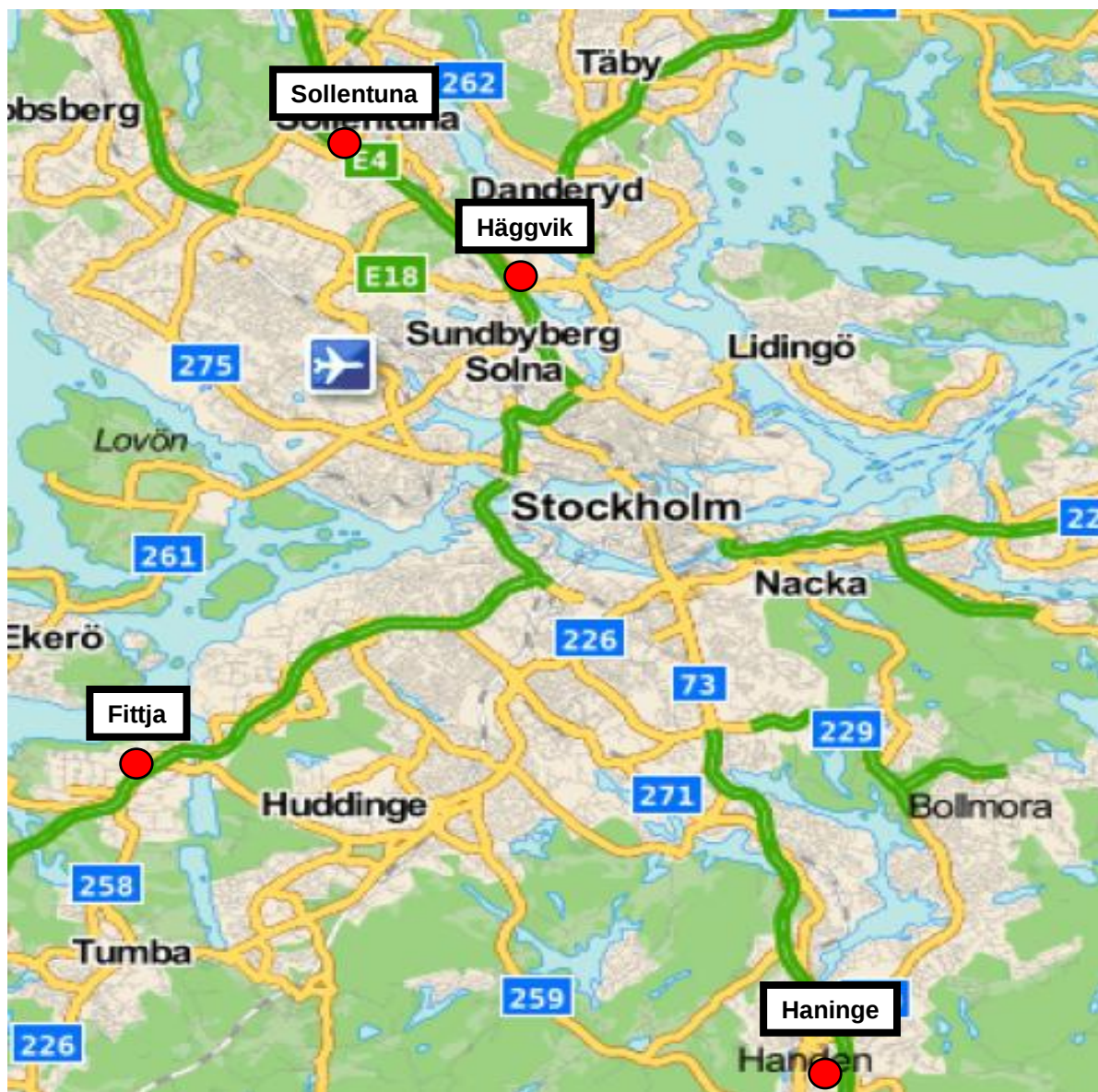


Mobile storage 2400 Nm³ 300 bar



High pressure gas transport





E.ON har tillsammans med OKQ8 identifierat följande etableringar för LNG (flytande gas).

- Sollentuna
- Häggvik
- Fittja
- Haninge

Marketing methane as a vehicle fuel

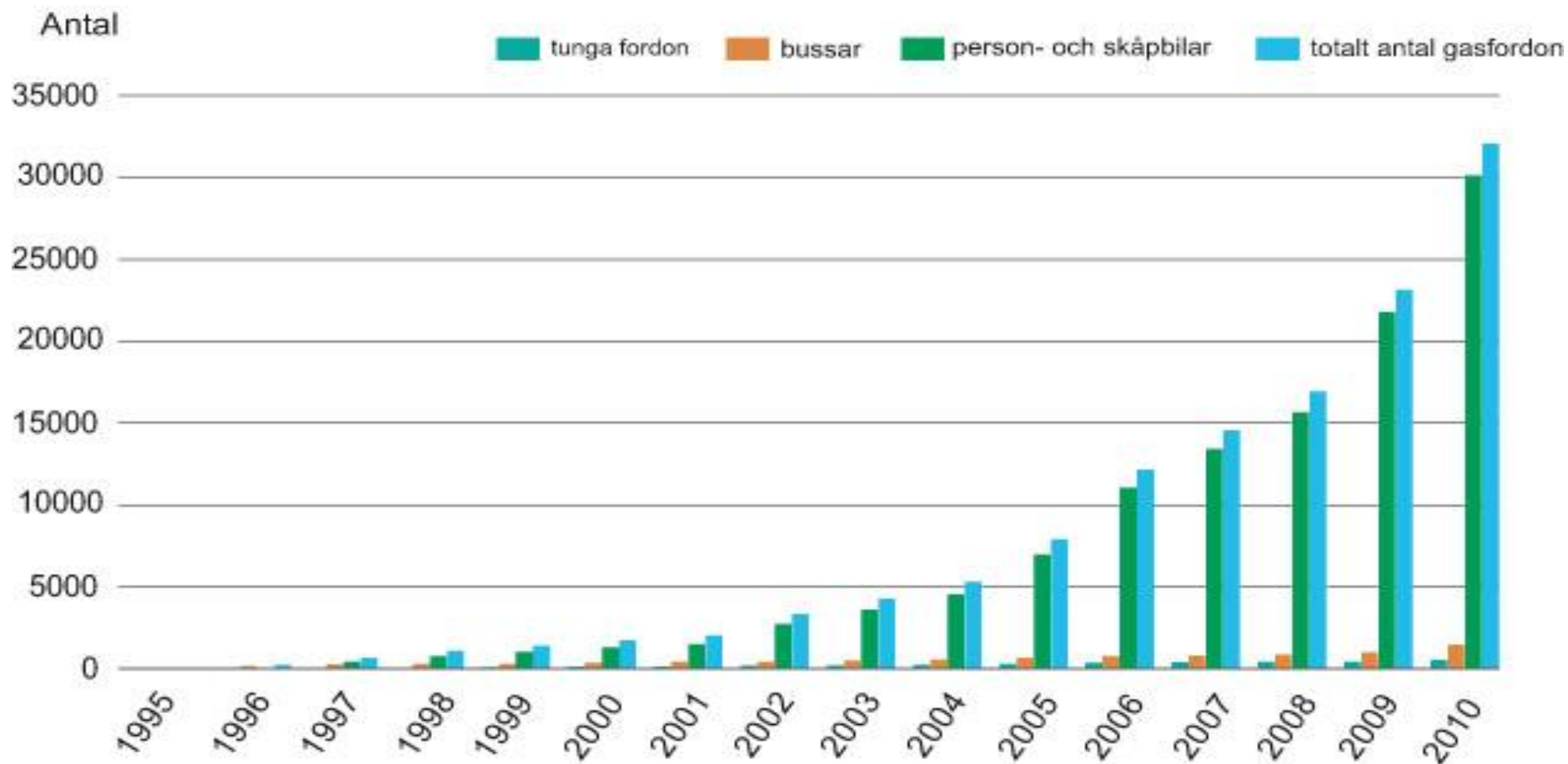
- E.ON Gas Sverige AB sells compressed natural gas and biogas at 35 public filling stations in the south of Sweden
18 busdepots
The yearly volume is 400 GWh -
replacing about 40 million liters of gasoline/diesel
- 40 % is biogas

Target:

- Supply 2 000 GWh/year in 2020, of which biogas will account for 75-100 %



Antal gasbilar i Sverige



Emerging demand and economy

EU directive for renewables

Developing the agriculture sector – new possibilities

High environmental benefit – global, local and regional

Technologies for producing and use are in place

Low or zero tax in many countries

Infrastructure in place

Huge potential – organic waste, manure, crops and in the future wood

Kombinerad LNG LCNG fuel station



e-on



If this car can run on biogas,
so can yours.
E.ON Vehicle Gas –
Cheaper. Cleaner. Greener.

e-on