

More sustainable energy in Sweden

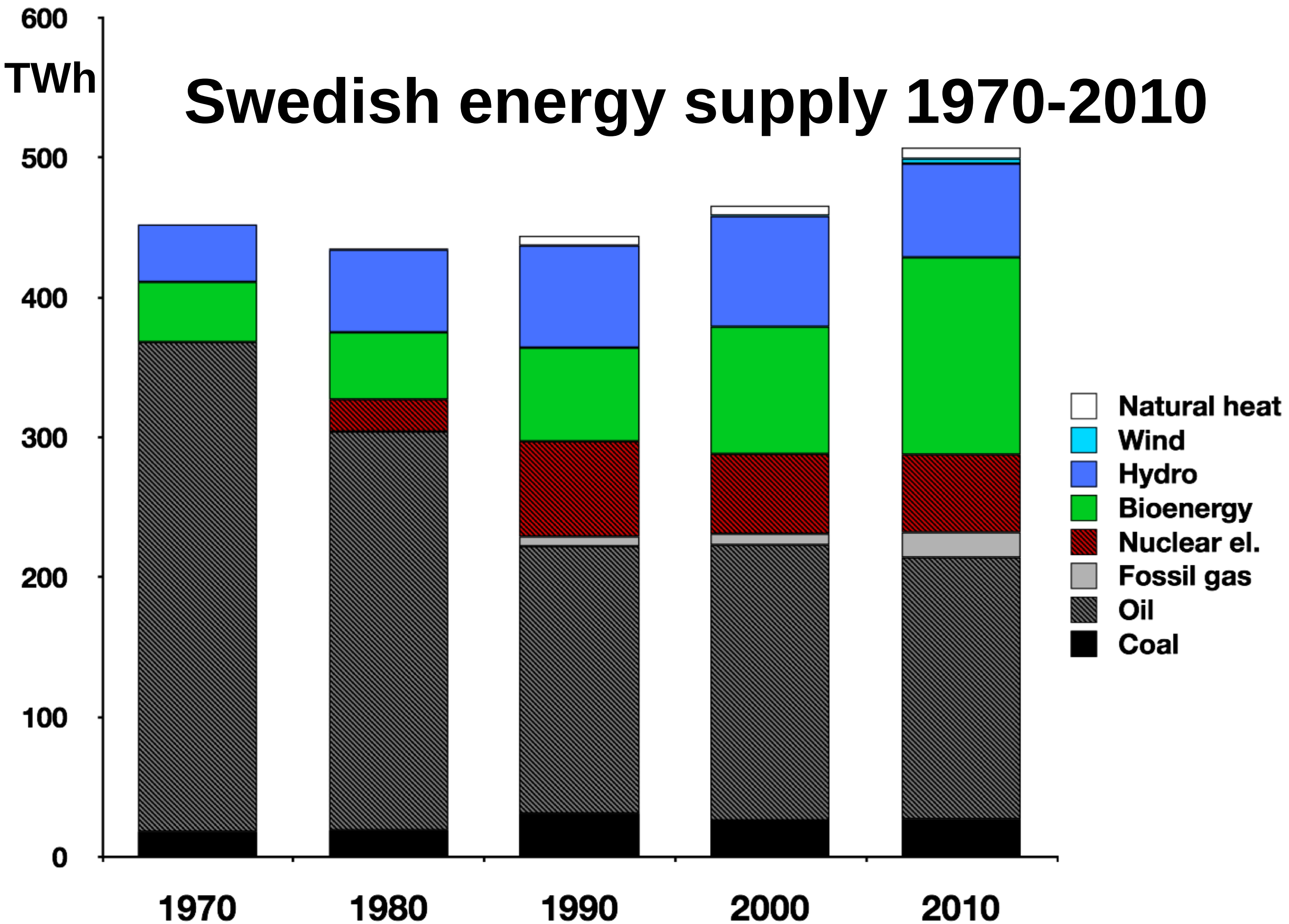
Tomas Kåberger

Professor

Former Director General of the Swedish Energy Agency,
Executive board chair of Japan Renewable Energy
Foundation

Sweden and Thailand

- Significant bioenergy use in common
- Significant renewable resources in common
- Different support instruments for renewable electricity
- Different results for wind and solar



Bioenergy use in Sweden 1970-2010

150

TWh

100

50

0

1970 1980 1990 2000 2010

- >1/4 of total energy use

- 500 PJ

- 50 GJ/capita

- 1,7 kW/capita

- Largest

source of

domestic

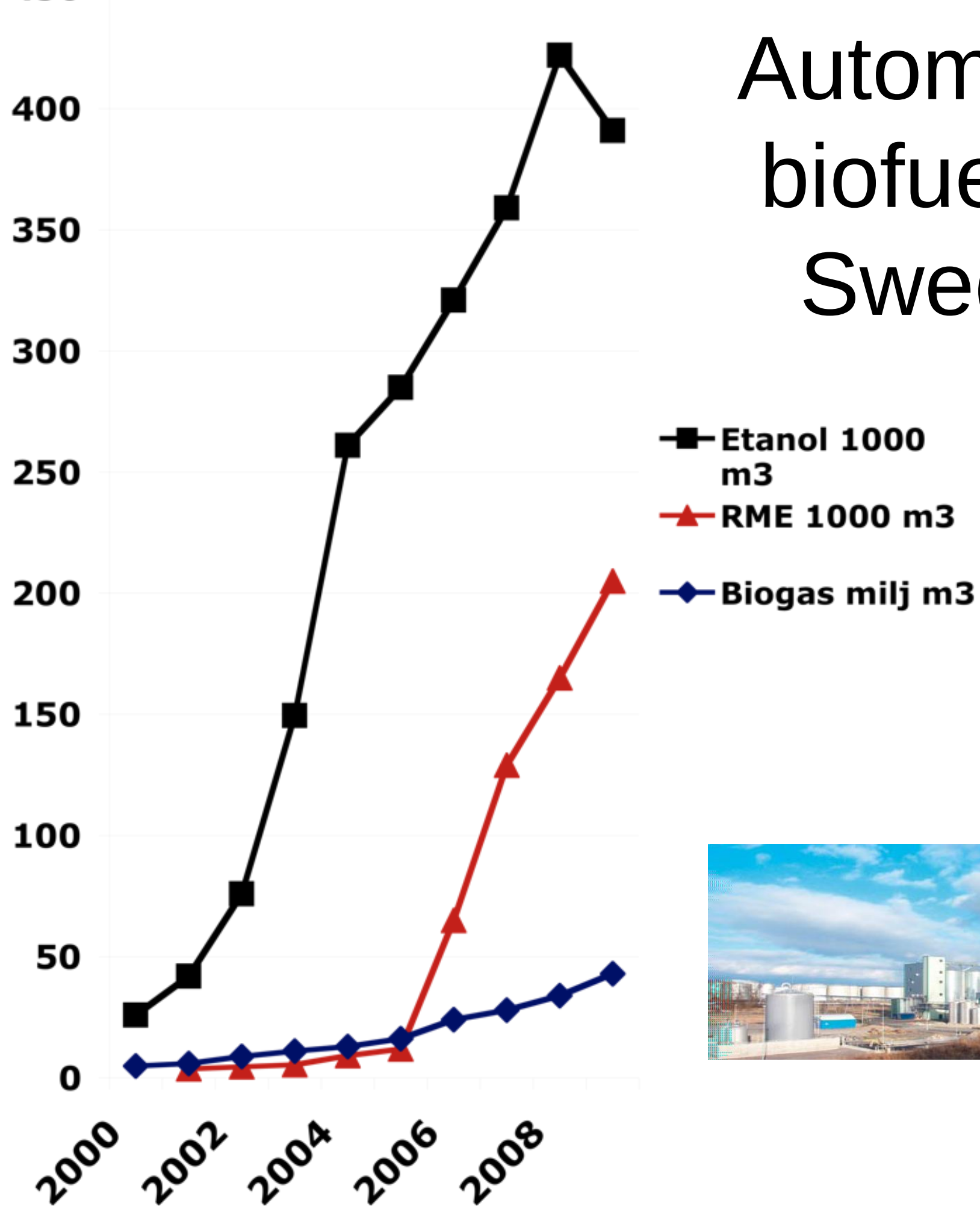
energy used

QuickTime och en
TIFF (okomprimerat)-dekomprimerare
krävs för att kunna se bilden.

Automotive biofuels in Sweden

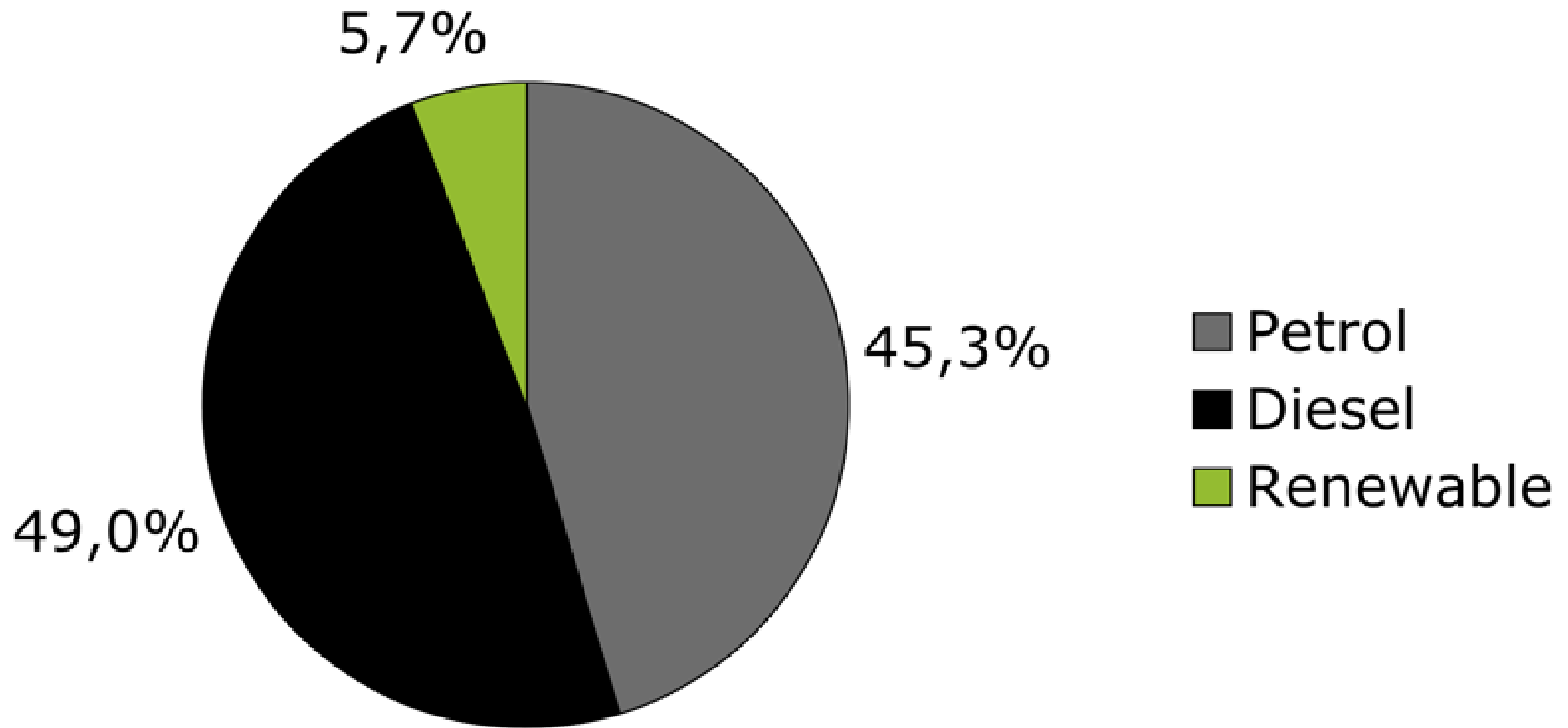


**2009: 5,3% of
road
transport
energy**



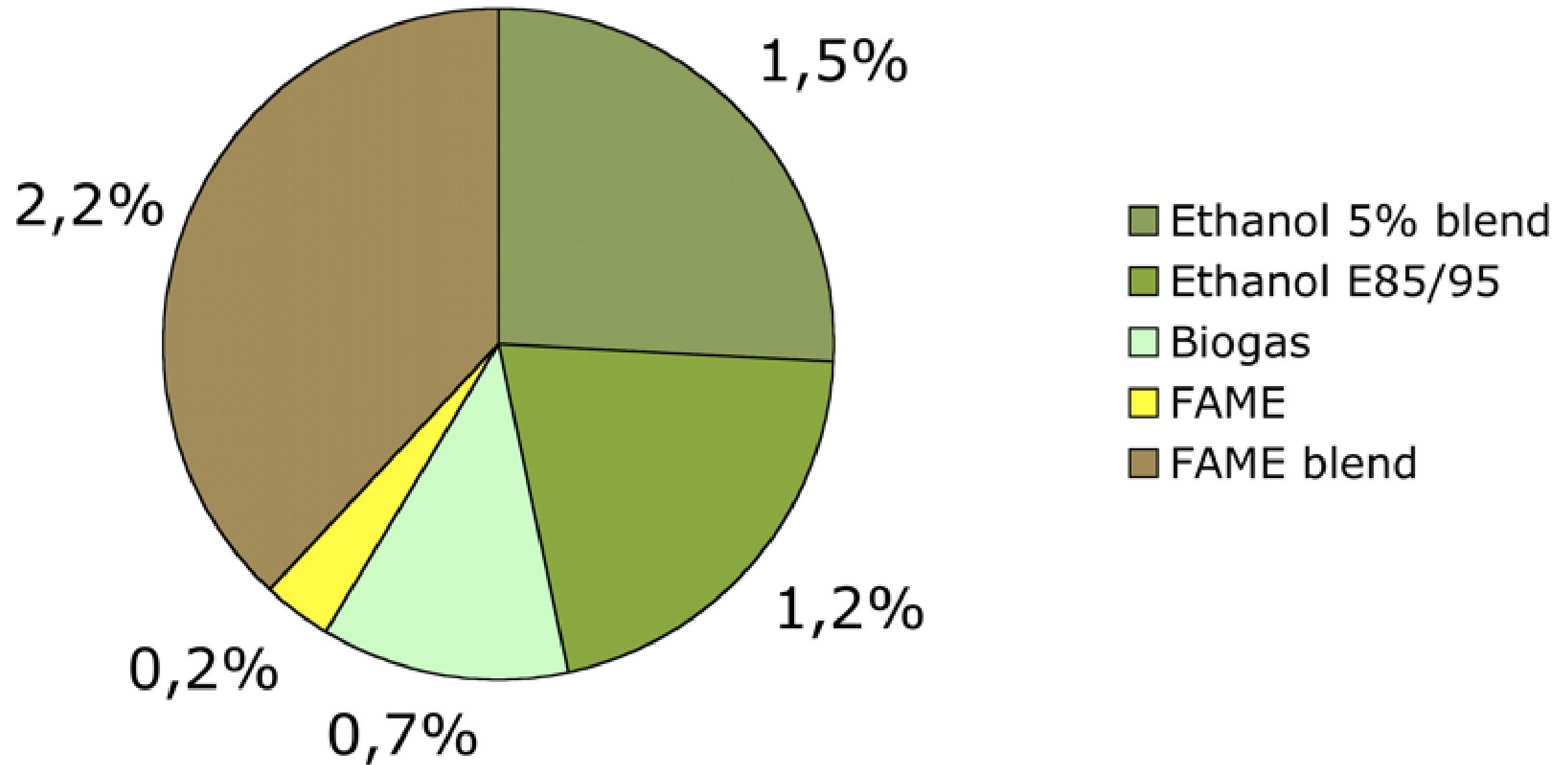
Automotive fuels in Sweden 2010

by energy

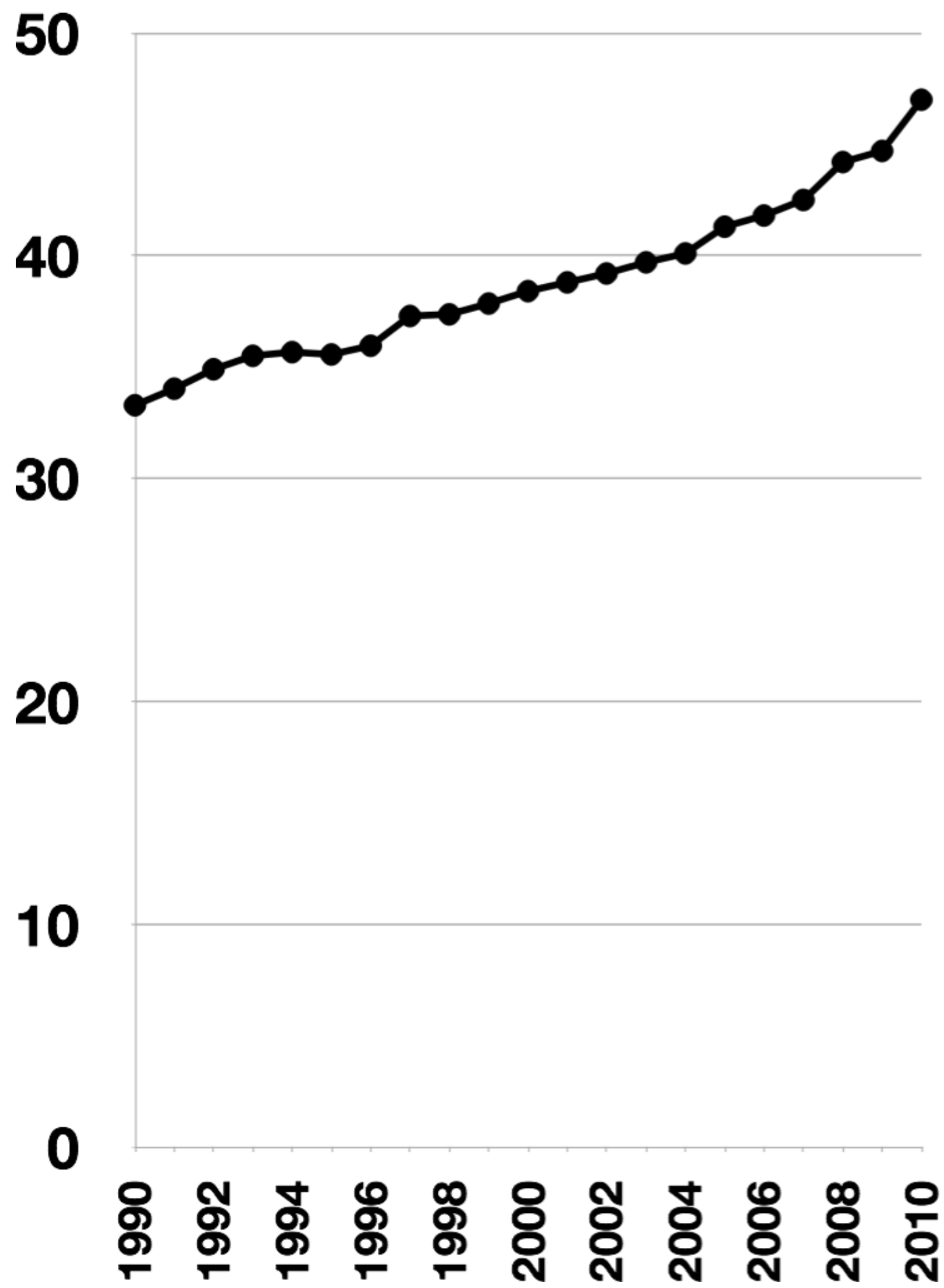


Biofuels in Sweden 2010, % of total automotive fuels

Bensin 45,3% (Petrol)
Diesel 49,0%

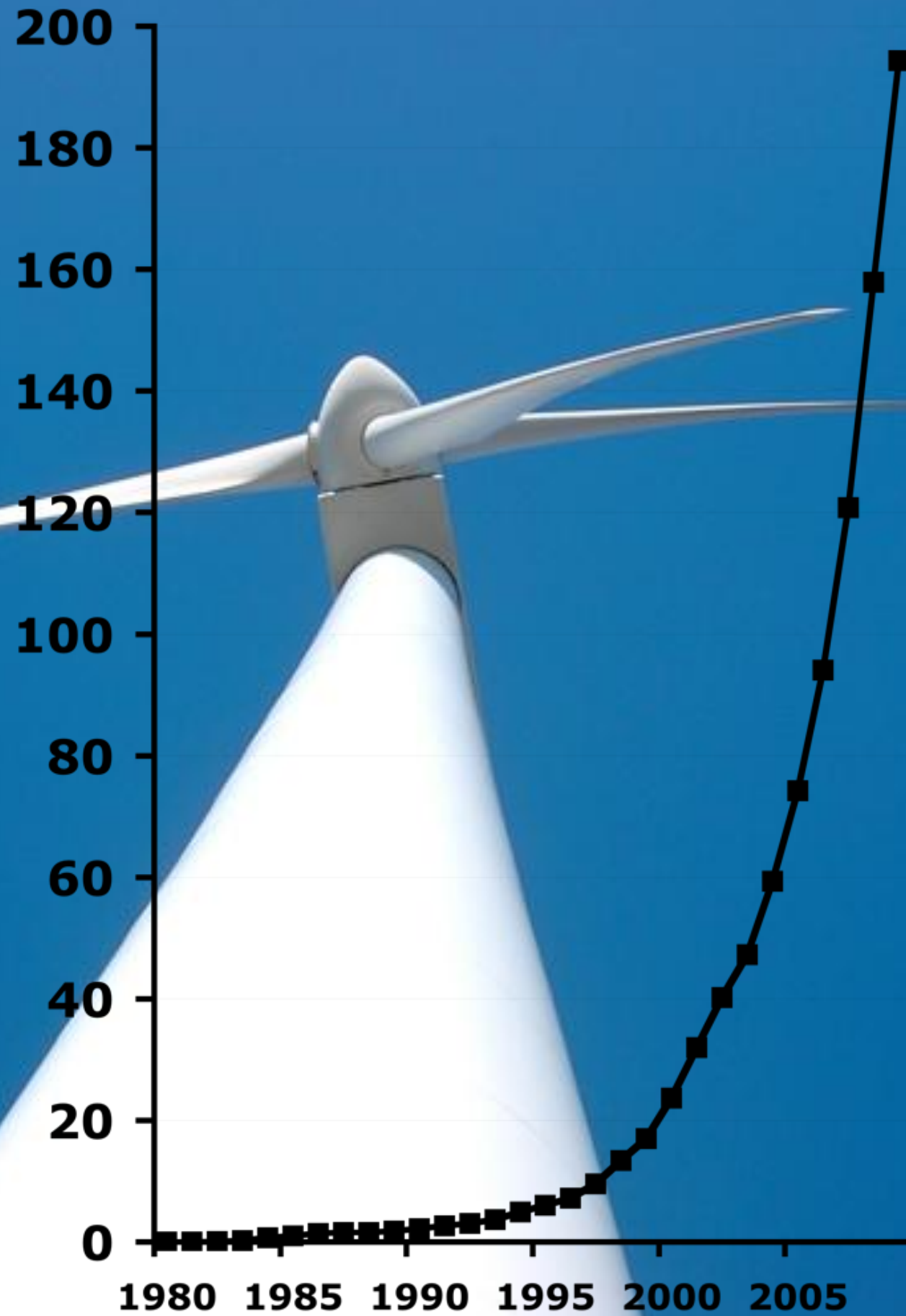


**Renewable
energy as
share of
total
energy
use**

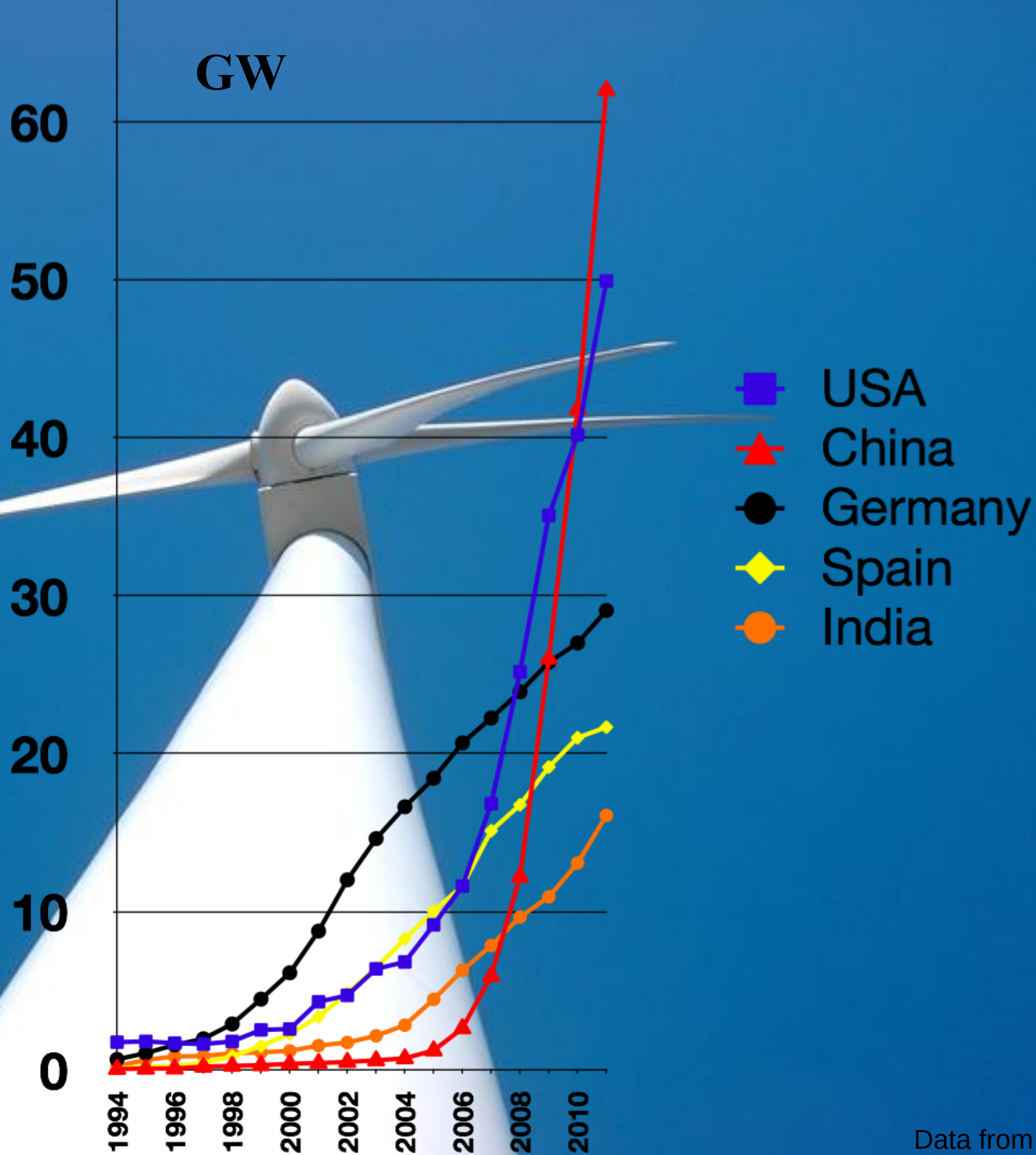


Global Wind power capacity 1980-2010

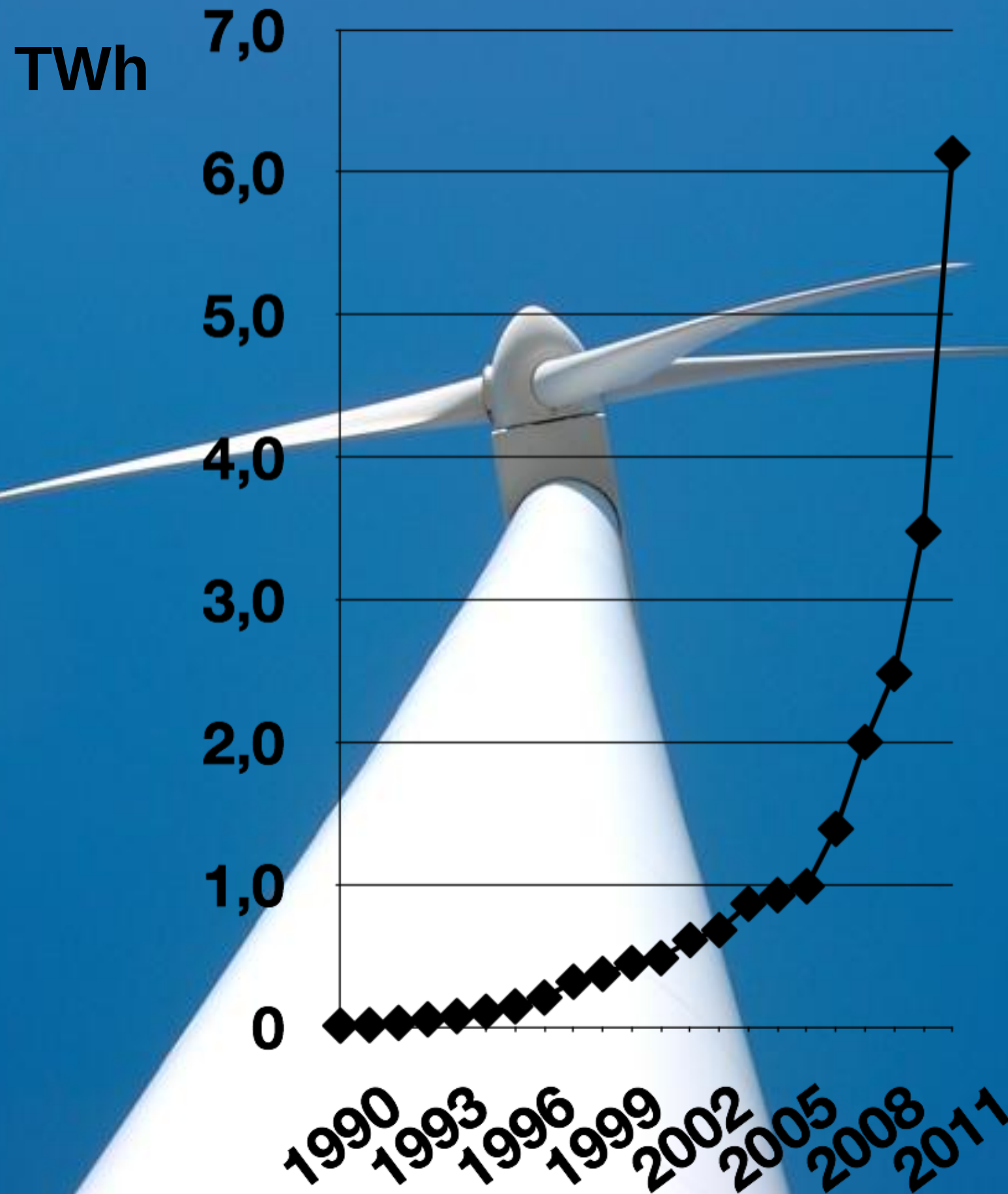
GW



Wind power in leading countries

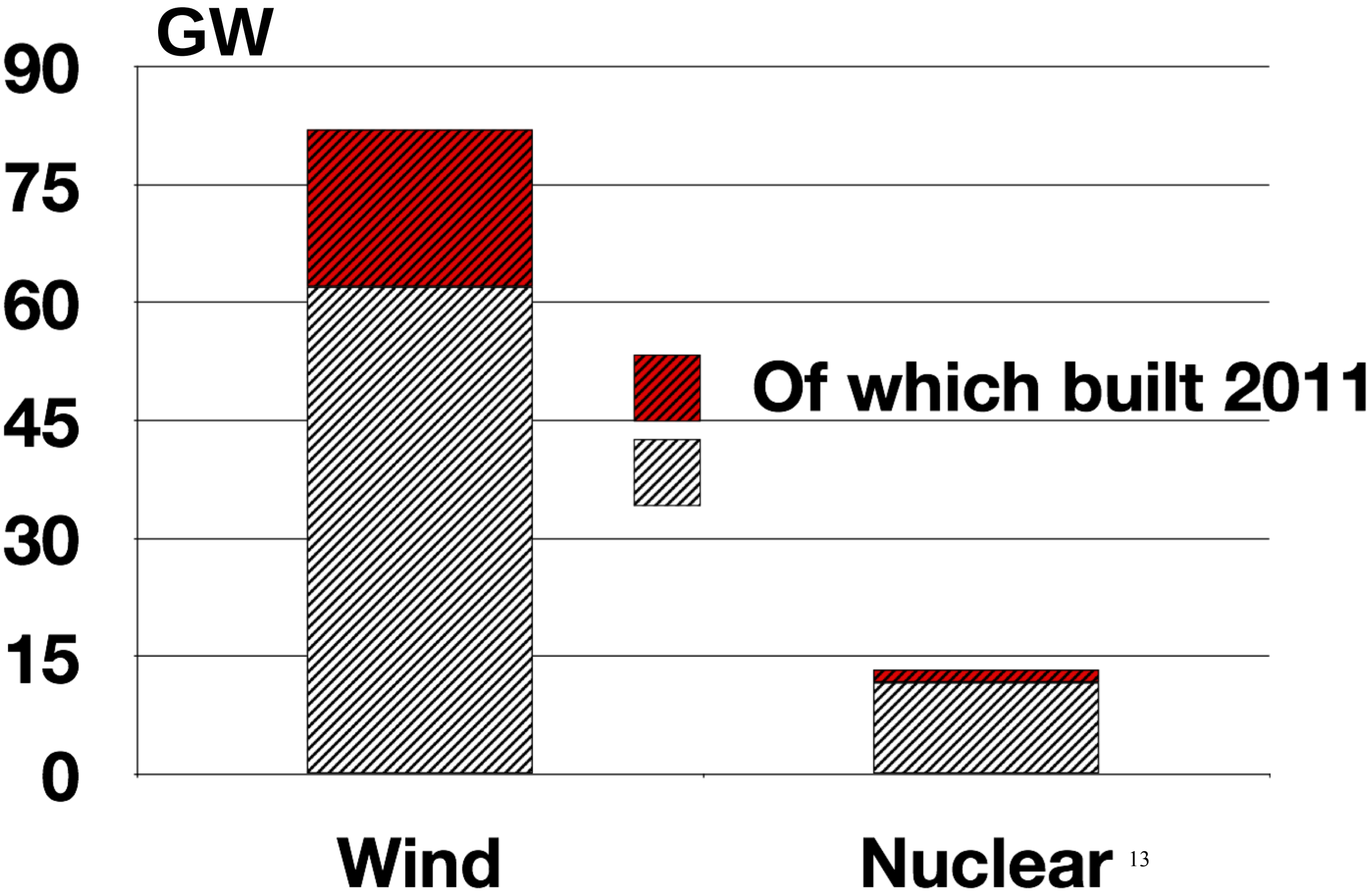


Wind electricity in Sweden

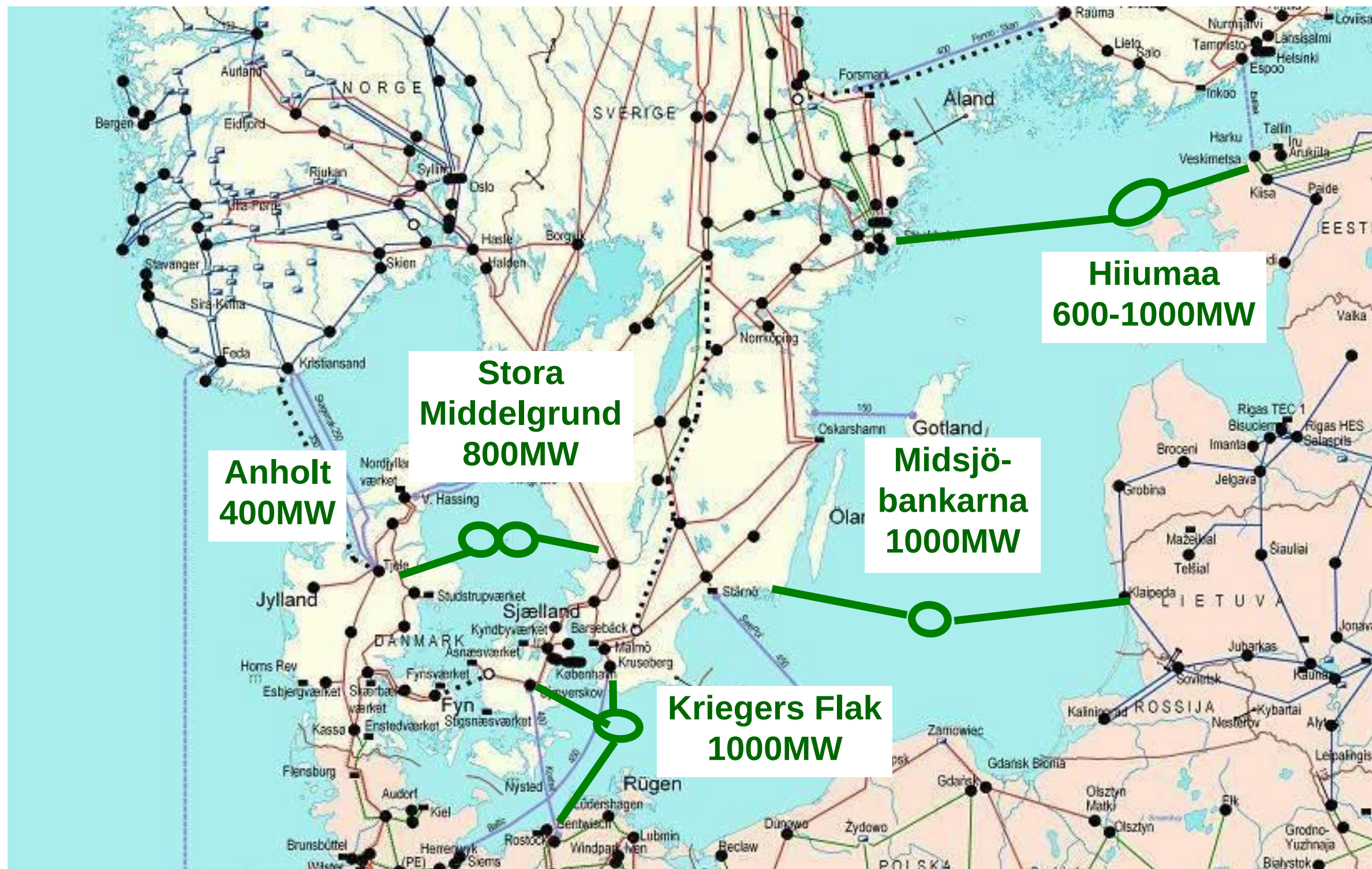




Power production capacity in China

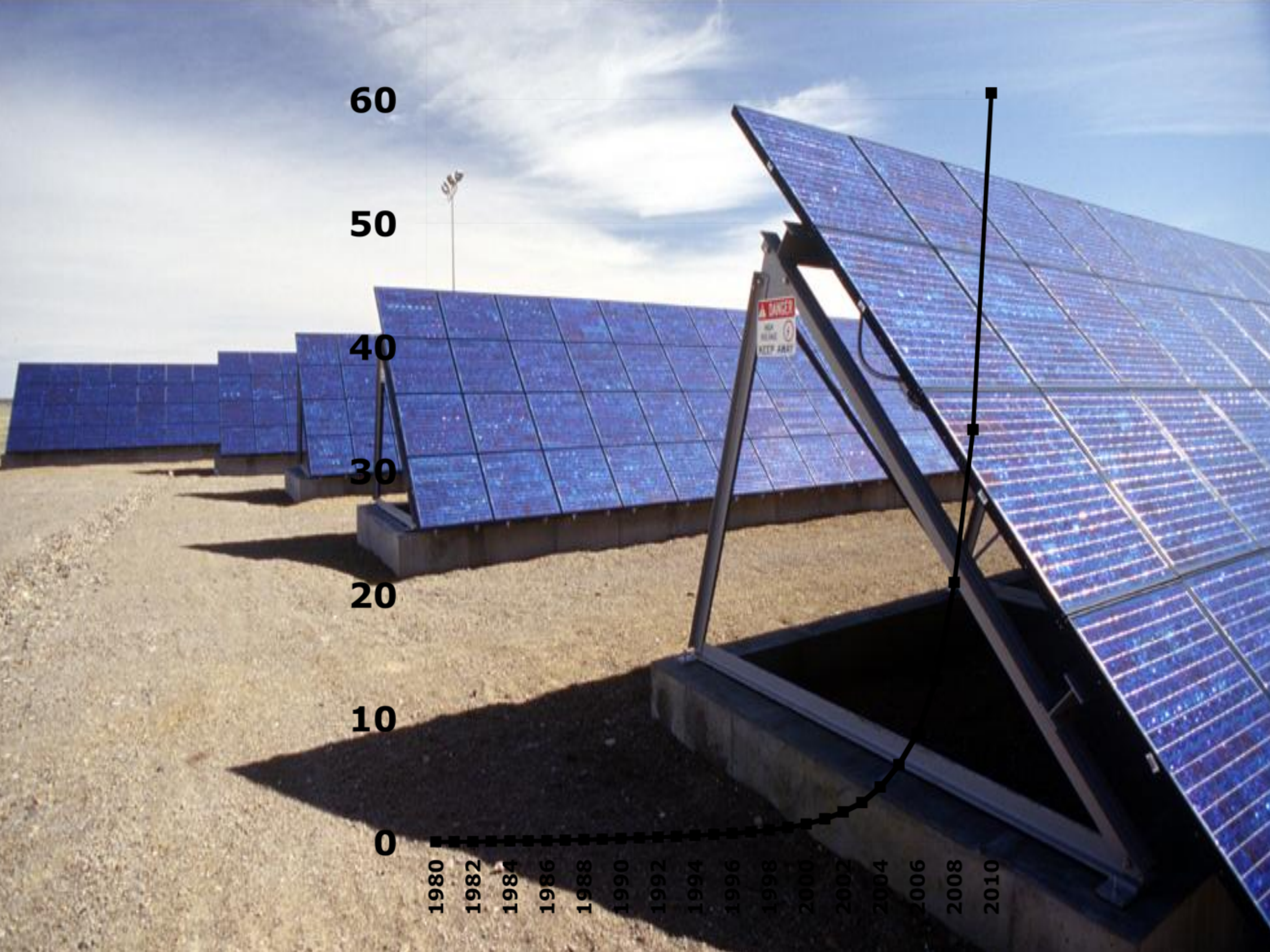


Windresources and sub-sea interconnectors



A transparent electricity market

- <http://www.nordpool.no/>
- <http://www.nordpoolspot.com/>
- Certificates
- <http://www.skm.se/priceinfo/>



60

50

40

30

20

10

0

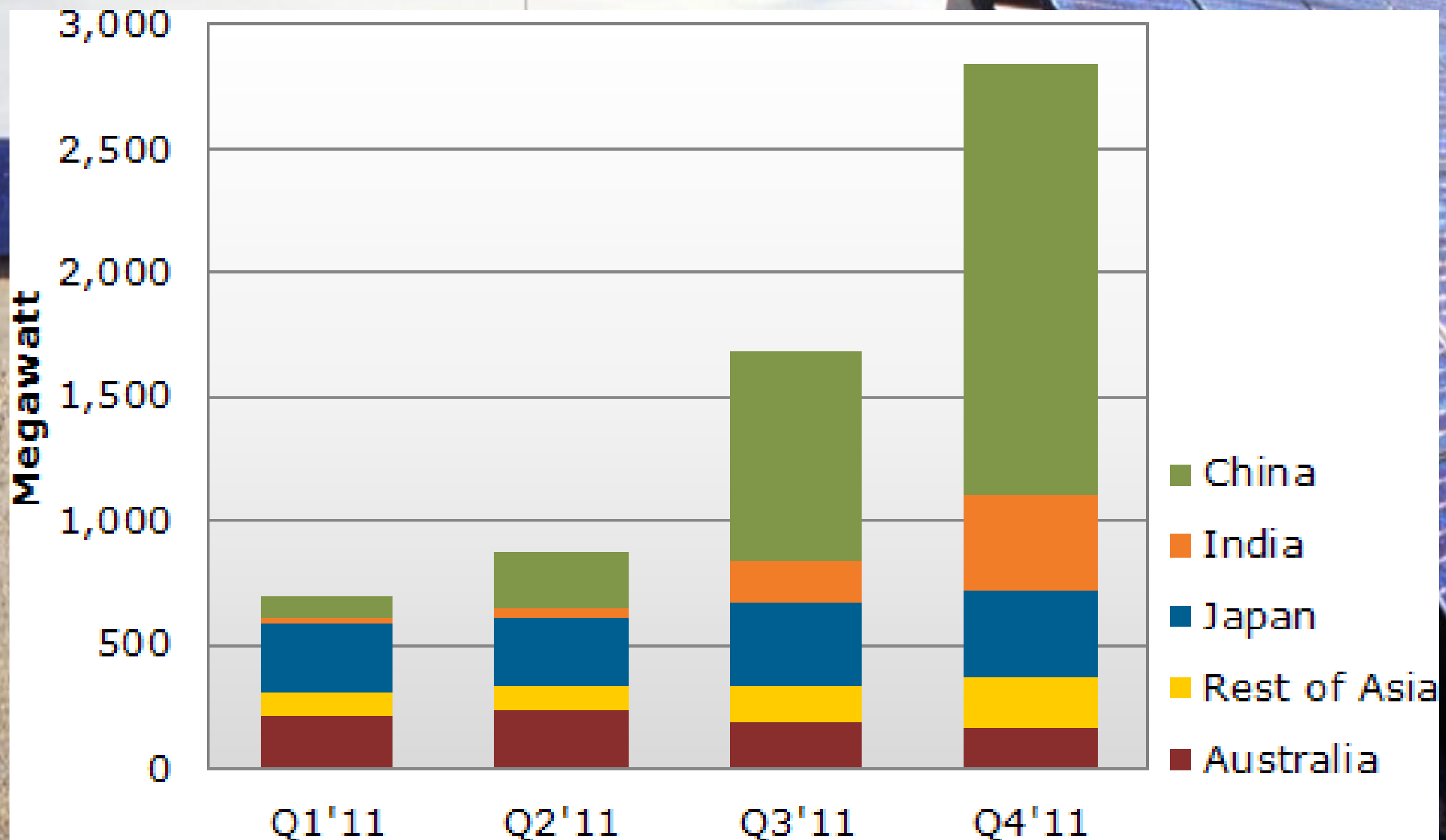
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010

⚠ DANGER
HIGH VOLTAGE
KEEP AWAY



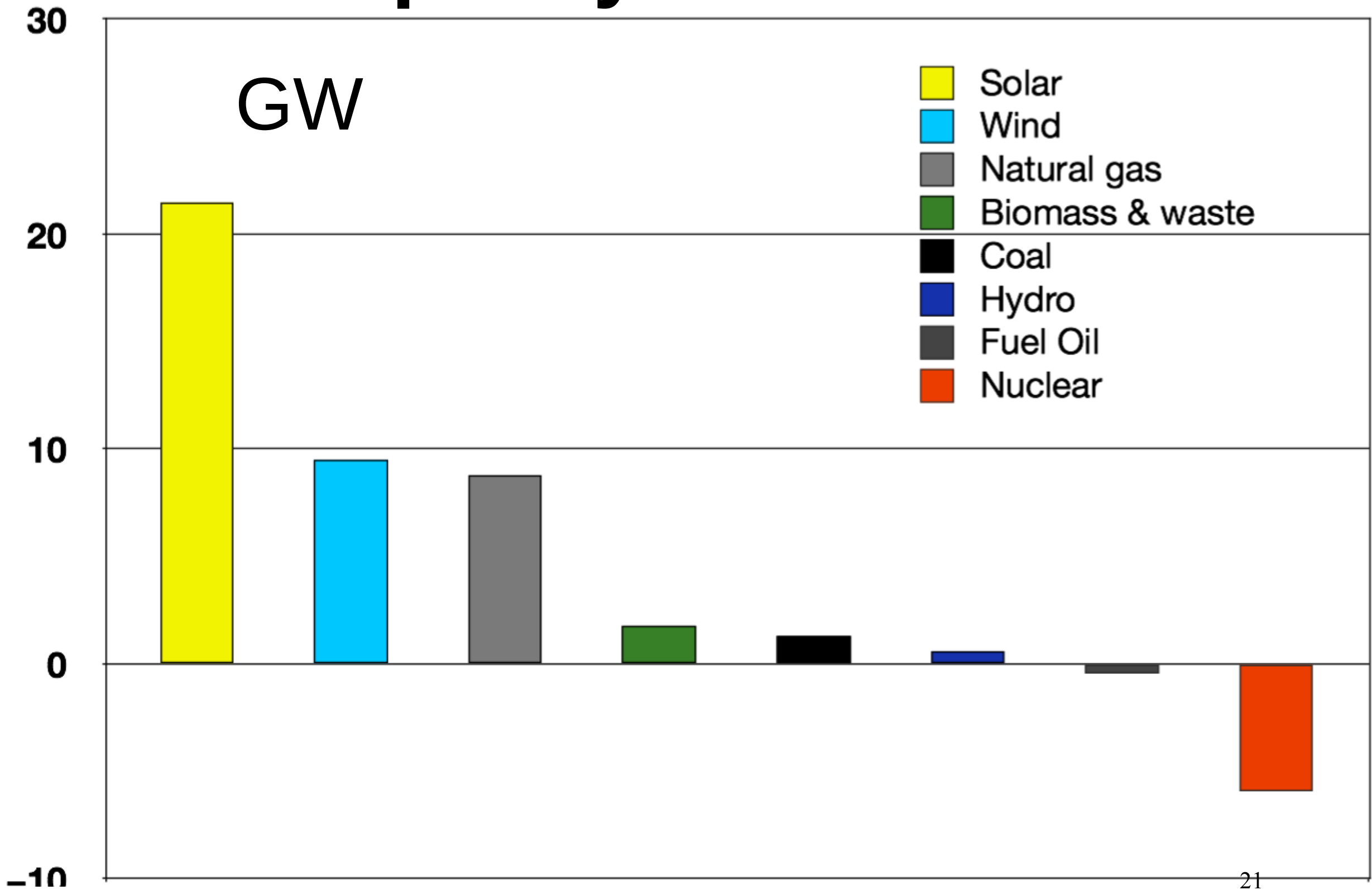


Solar PV Asia Pacific Market Demand by Region (Q1'11-Q4'11)

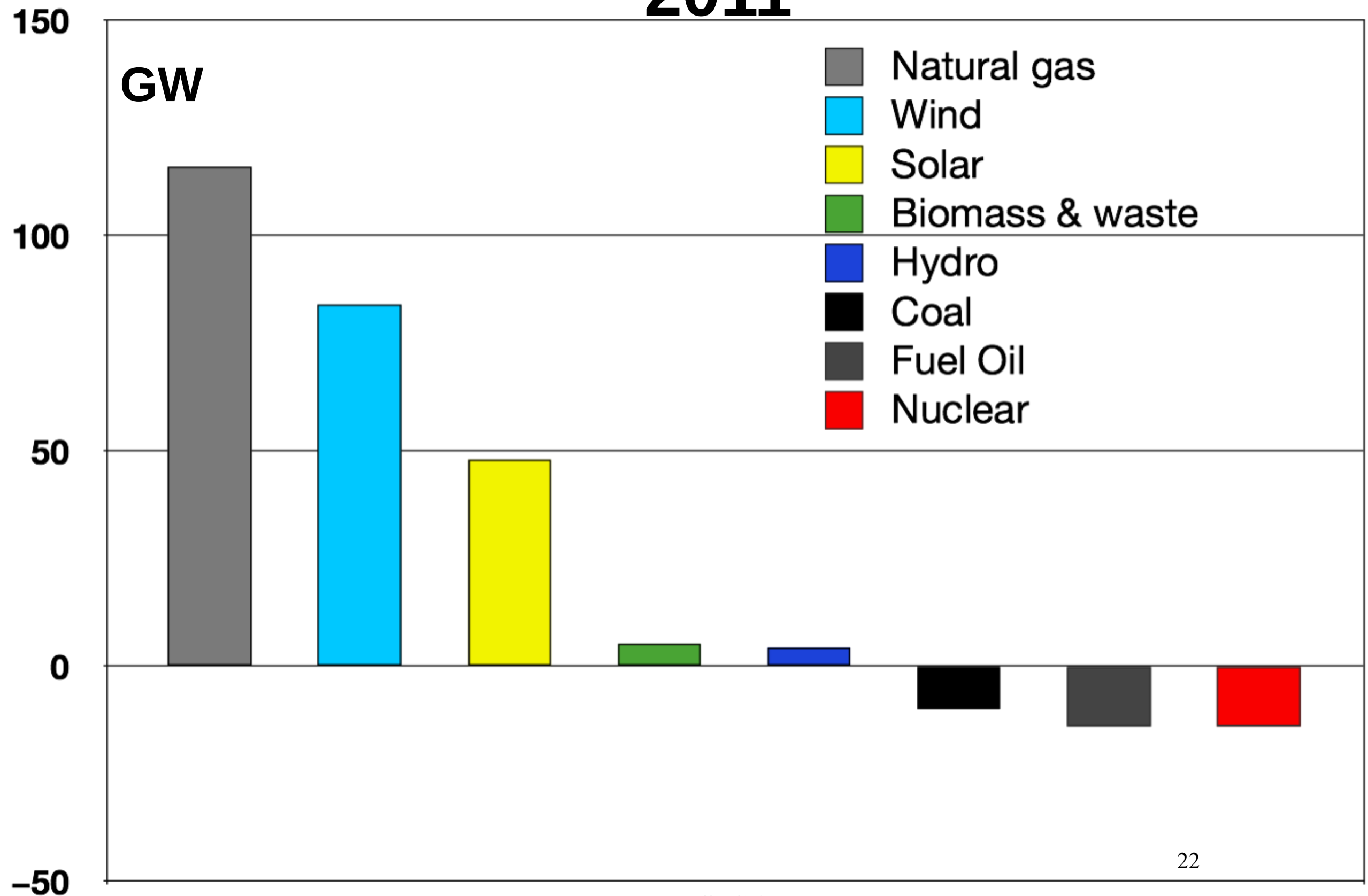




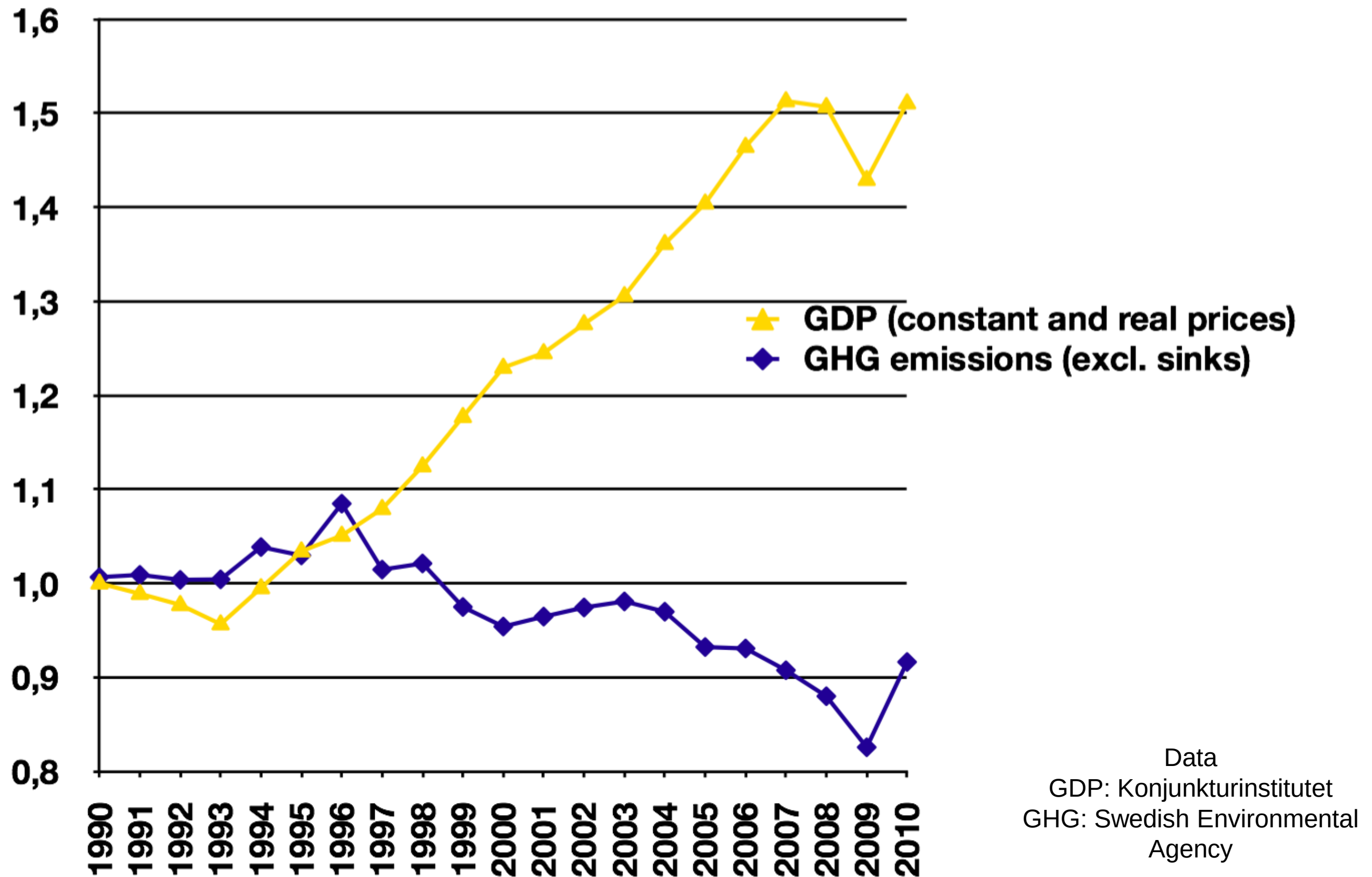
New electricity generation capacity in the EU 2011



New net production capacity in EU 2000-2011



Sweden GDP and GHG emission 1990-2010



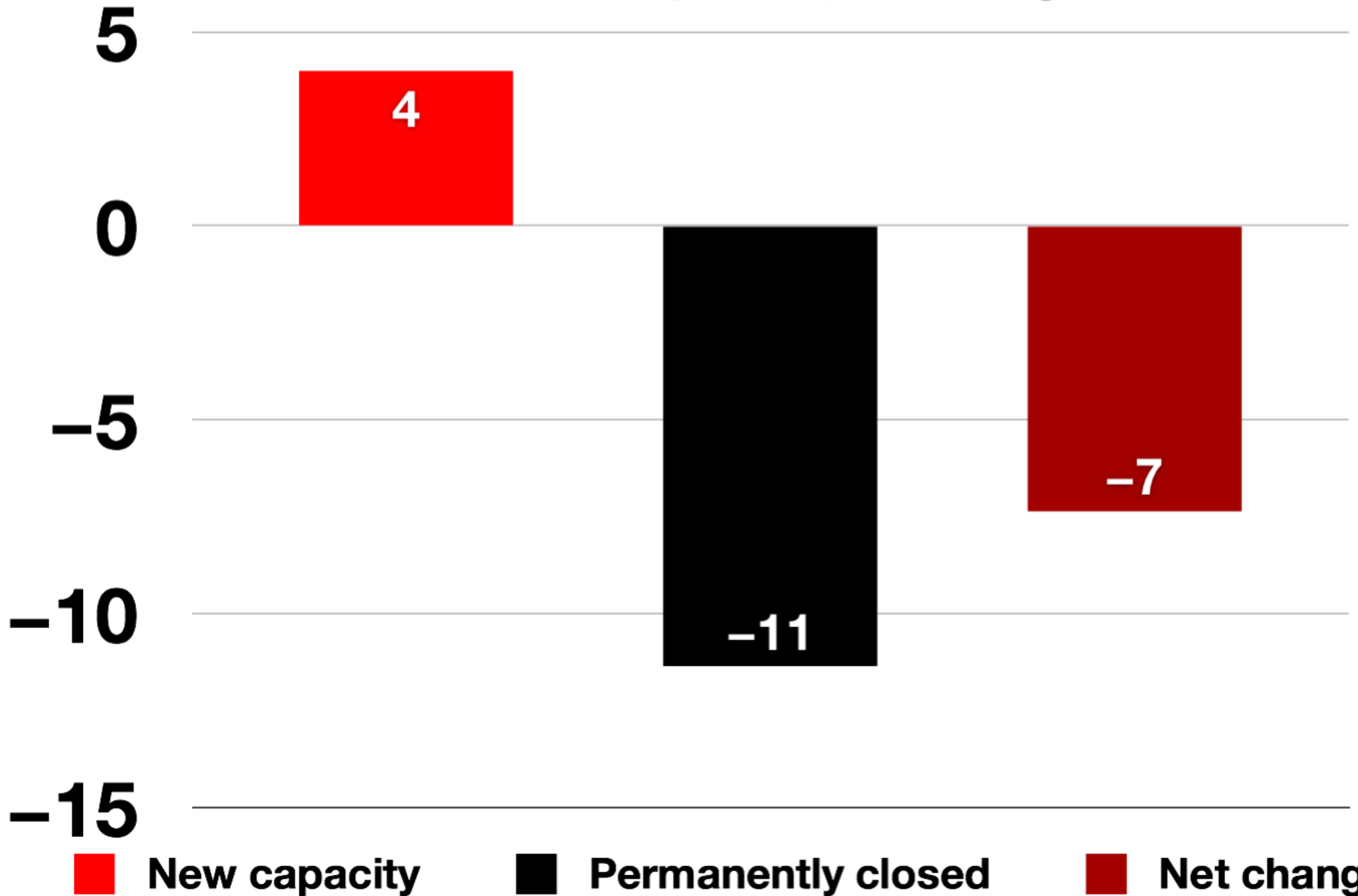
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Global nuclear capacity change 2011, GW



Data from IAEA Pris

Global new, gross capacity, GW

