

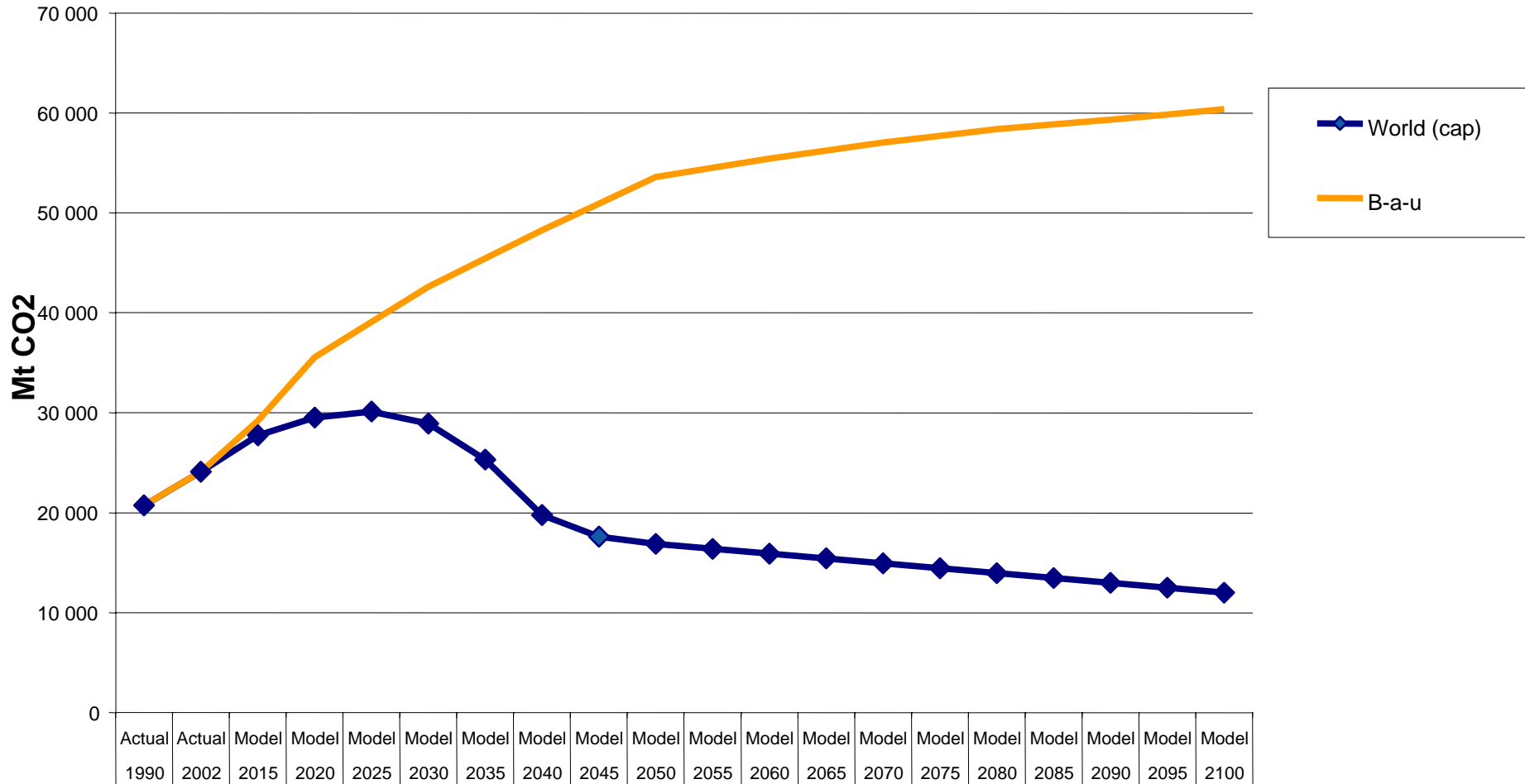


From EU ETS to a global framework – an industry perspective

Lars G. Josefsson
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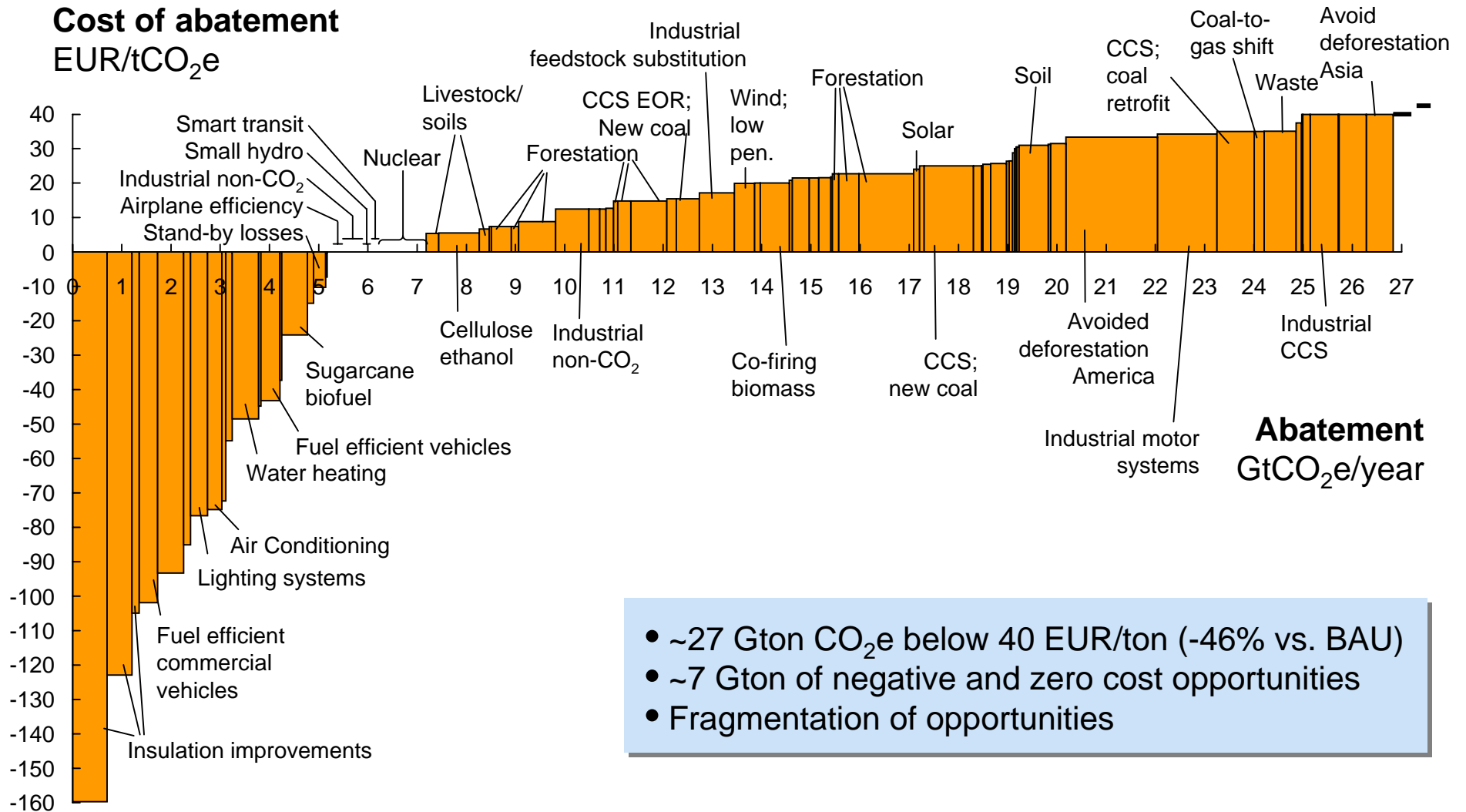
Currently we are diverging

CO2 Emissions from fuel combustion Early peak vs BAU



Stabilization is possible at limited costs – markets can supply

2030



All sectors and regions will have to contribute to emissions reductions – global cooperation is key to the low carbon economy

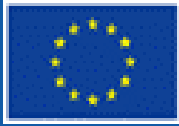
GtCO₂e, 2030

BACKUP

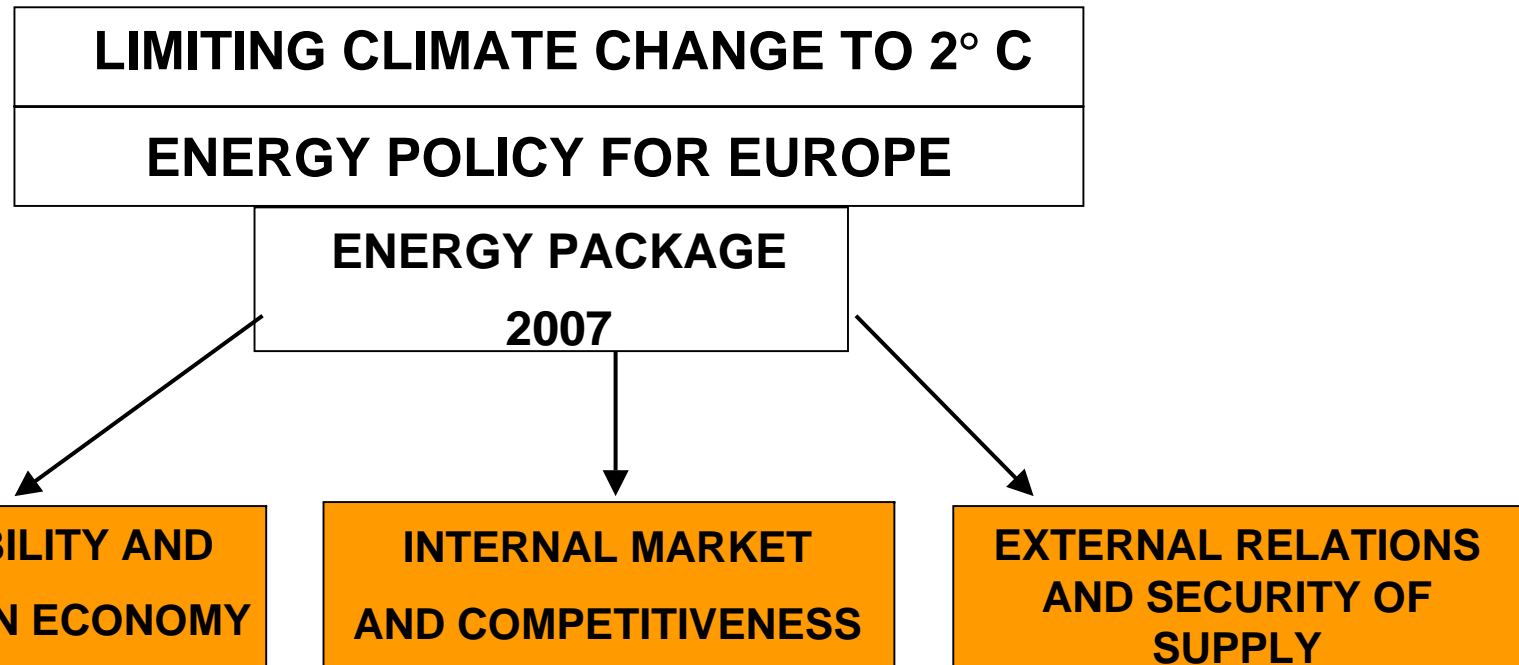
| Sector | Regions | | | | | | Total |
|----------------|-------------|-------------|-------------------------------|-------------------|------------|-----------------|-------------|
| | US + Canada | OECD Europe | Eastern Europe (incl. Russia) | Other Industrial* | China | Rest of world** | |
| Power | 1.3 | 0.8 | 0.3 | 0.7 | 1.7 | 1.0 | 5.9 |
| Industrial | 0.8 | 0.6 | 0.7 | 0.8 | 1.5 | 1.5 | 6.0 |
| Transportation | 1.2 | 0.5 | 0.1 | 0.4 | 0.3 | 0.4 | 2.8 |
| Buildings | 0.8 | 0.5 | 0.4 | 0.5 | 0.7 | 0.8 | 3.7 |
| Forestry | 0.2 | 0 | 0 | 0 | 0 | 6.5 | 6.7 |
| Agriculture | 0.2 | 0.1 | 0.1 | 0.1 | 0.3 | 0.8 | 1.5 |
| Total | 4.4 | 2.5 | 1.6 | 2.5 | 4.6 | 11.1 | 26.7 |

* Australia, New Zealand, Japan, Singapore, South Korea, Taiwan, UAE, Saudi Arabia, Qatar, Oman, Kuwait, Israel, Bahrain, Mexico

** Africa, South and Central America excl. Mexico, Asia excl. China and countries included in "Other industrialized" (see previous note)



ENERGY FOR A CHANGING WORLD



Business and industry have to show leadership

"The 3C Initiative aims at forming a global opinion group consisting of companies showing leadership by demanding an integration of climate issues into the world of markets and trade facilitated by means of a global framework coming into force in 2013. "

| | | | |
|---------------|-------------|------------------|--------------|
| ABB | Switzerland | Eskom | South Africa |
| Alcan Inc. | Canada | General Electric | USA |
| Alstom | France | Norske Skog | Norway |
| Areva | France | NRG Energy | USA |
| Bayer | Germany | Otto Group | Germany |
| Centrica | UK | PG & E Corp. | USA |
| Deutsche Bahn | Germany | RAO UESR | Russia |
| Deutsche Post | Germany | Reuters | UK |
| Duke | USA | Siemens | Germany |
| EnBW | Germany | Suez | France |
| Endesa | Spain | Wallenius Lines | Sweden |
| Enel | Italy | Vattenfall | Sweden |
| E.ON | Germany | | |

www.combatclimatechange.org

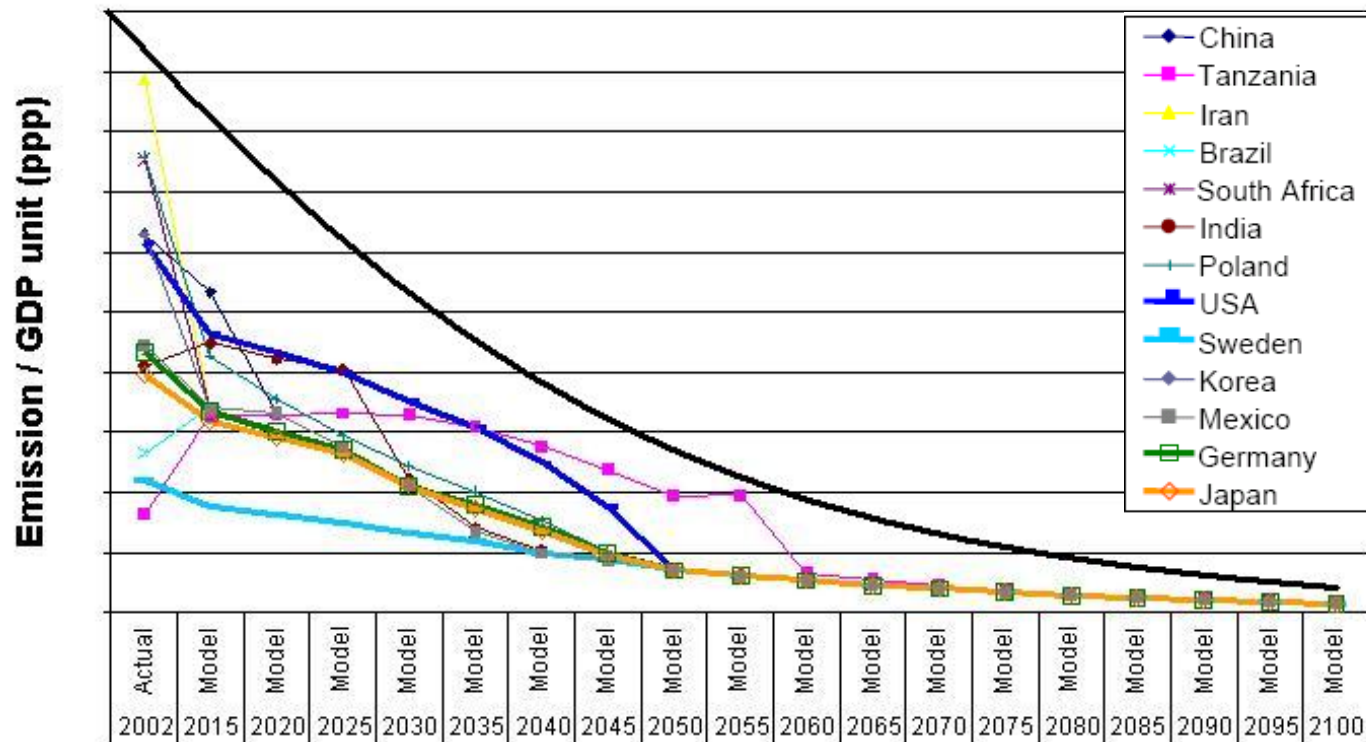


COMBAT CLIMATE CHANGE

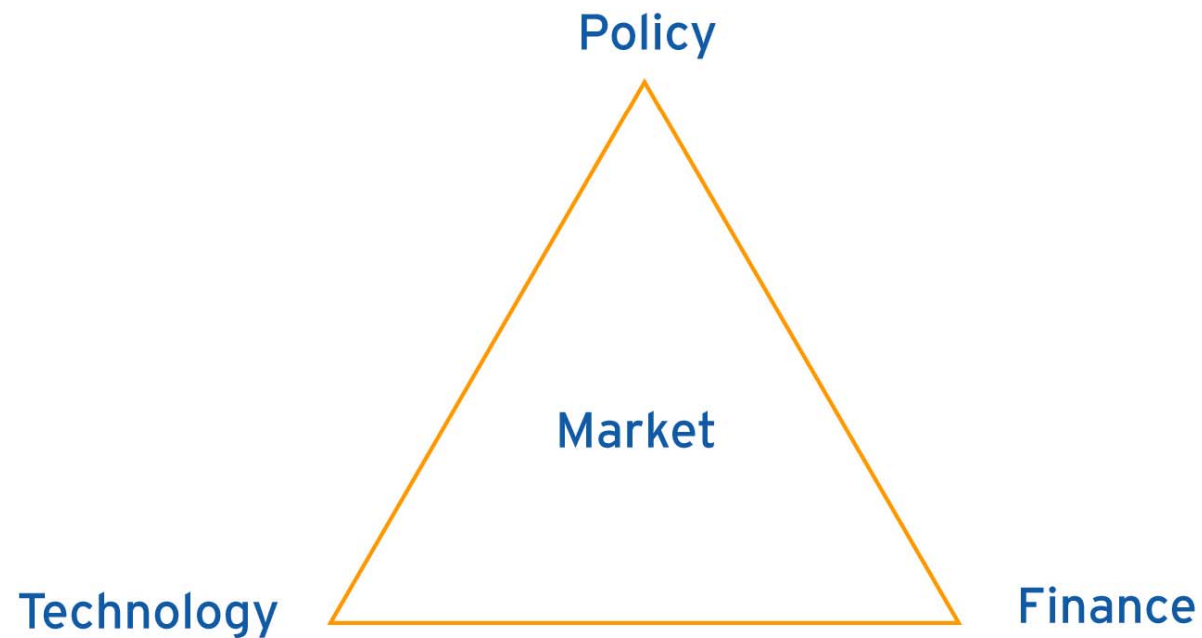
A Business Leaders' Initiative

The core of any solution is convergence – market demand can be created

The fish trap model – a funnel – shaped convergence process



Supply and demand lead to market incentives



Vattenfall's Global climate abatement map

Click on sectors and regions to navigate

Global overview

In 2002 global emissions of greenhouse gases were about 40 Gt CO₂e. The emissions are projected to grow to 58 Gt CO₂e 2030. To get on track for long-term climate stabilization, emissions in 2030 should not exceed 31 Gt CO₂e.

A total reduction potential of around 27 Gt CO₂e below a cost of €40/tonne CO₂e has been identified. The average reduction cost in 2030 is estimated to be around €15/tonne CO₂e.

| Metric | Value |
|-----------------------|-----------------------------|
| Reduction requirement | 27 Gt CO ₂ e |
| Reduction potential | 27 Gt CO ₂ e |
| Average cost | €15/tonne CO ₂ e |

Use and download in-depth information at:
www.vattenfall.com/climate

Global overview | Sectors | Regions

Source: All of the presented figures represent possible future scenarios, based on certain assumptions regarding global population and GDP development.