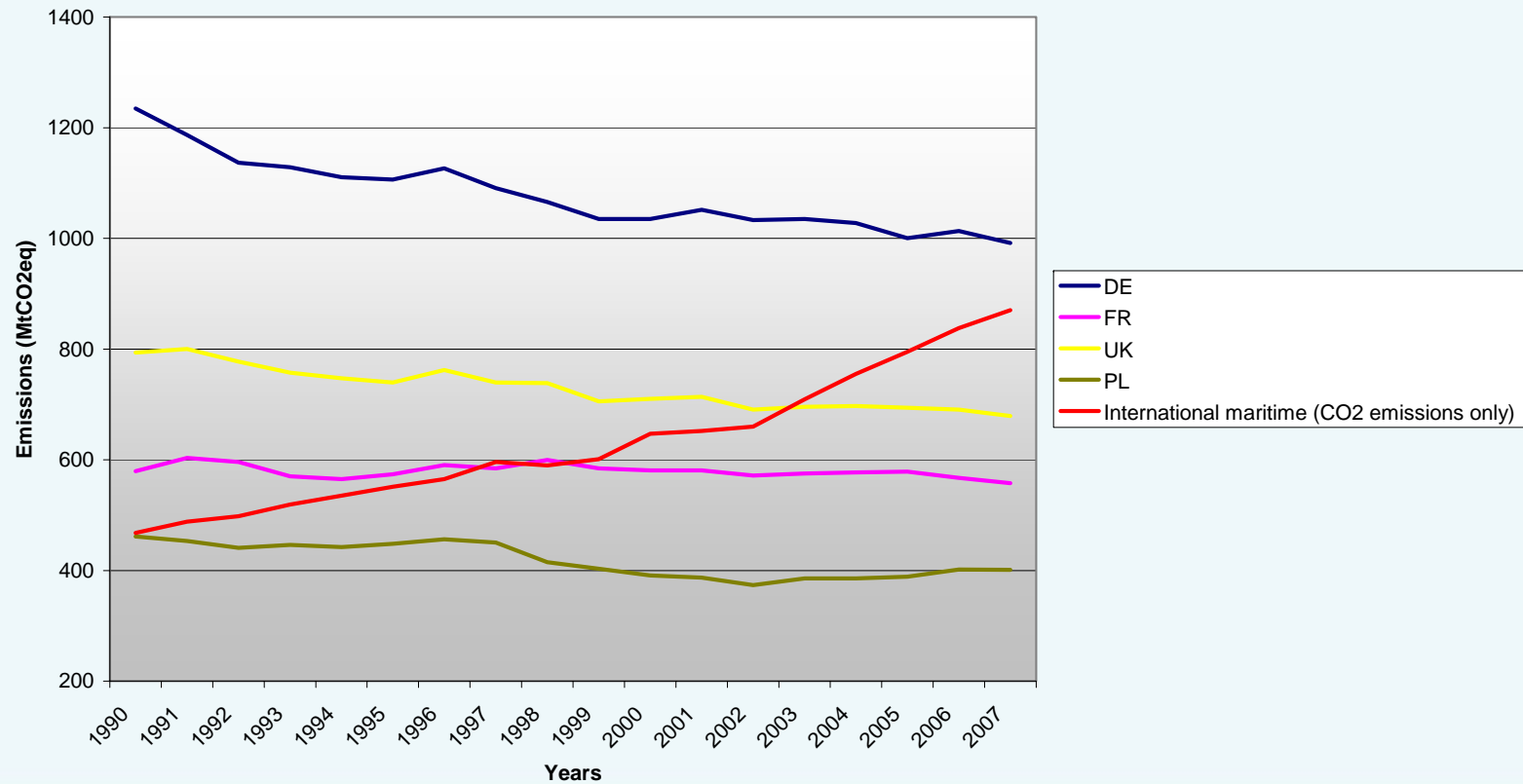


16 November 2011

Maritime GHG emissions – preparing for a potential EU measure

An increase of GHG emissions...

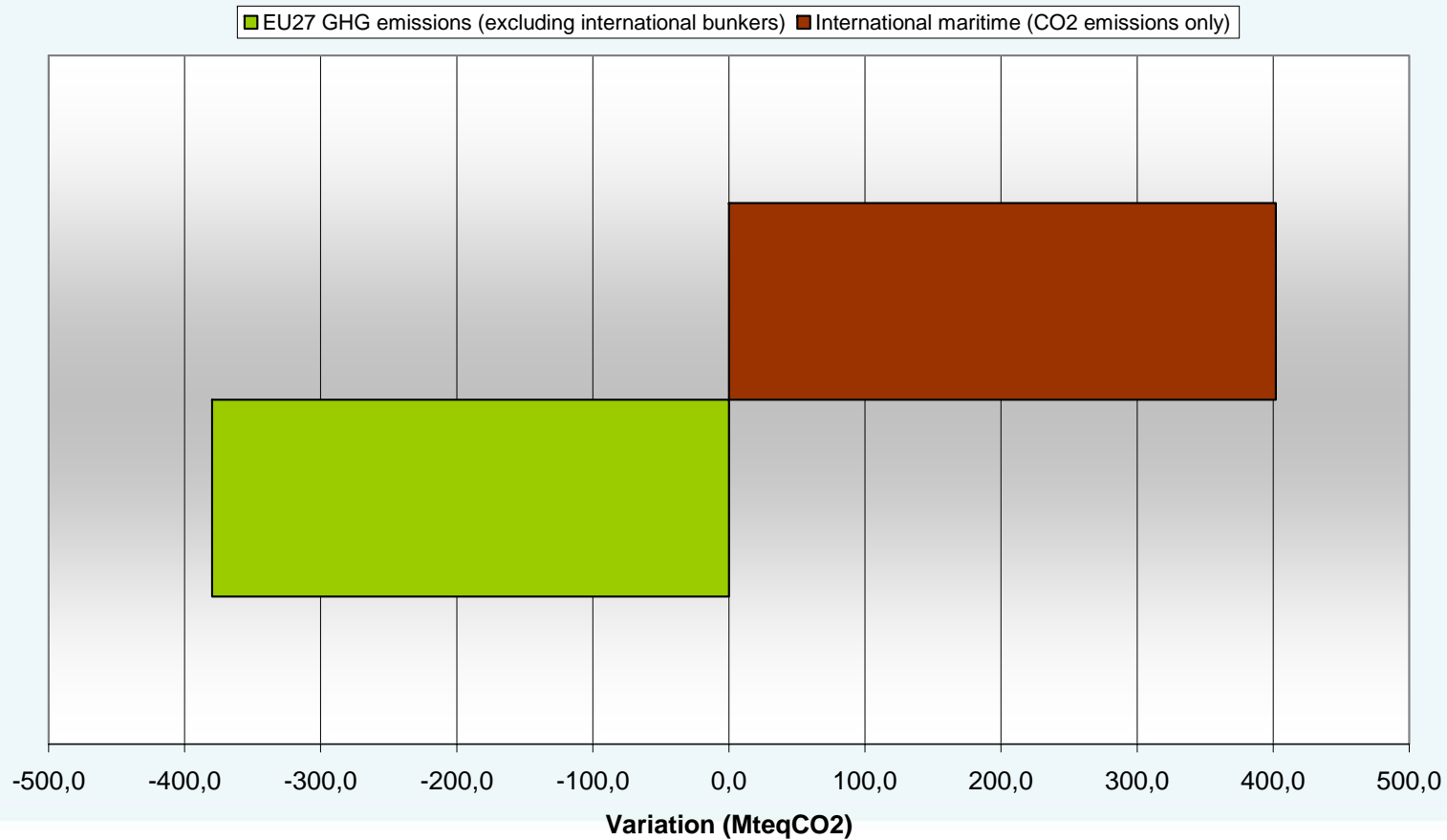
GHG emissions of various EU Member States (excl. international maritime) and of international maritime transport



Source: EU energy and transport in figures - Statistical pocketbook 2009, DG TREN

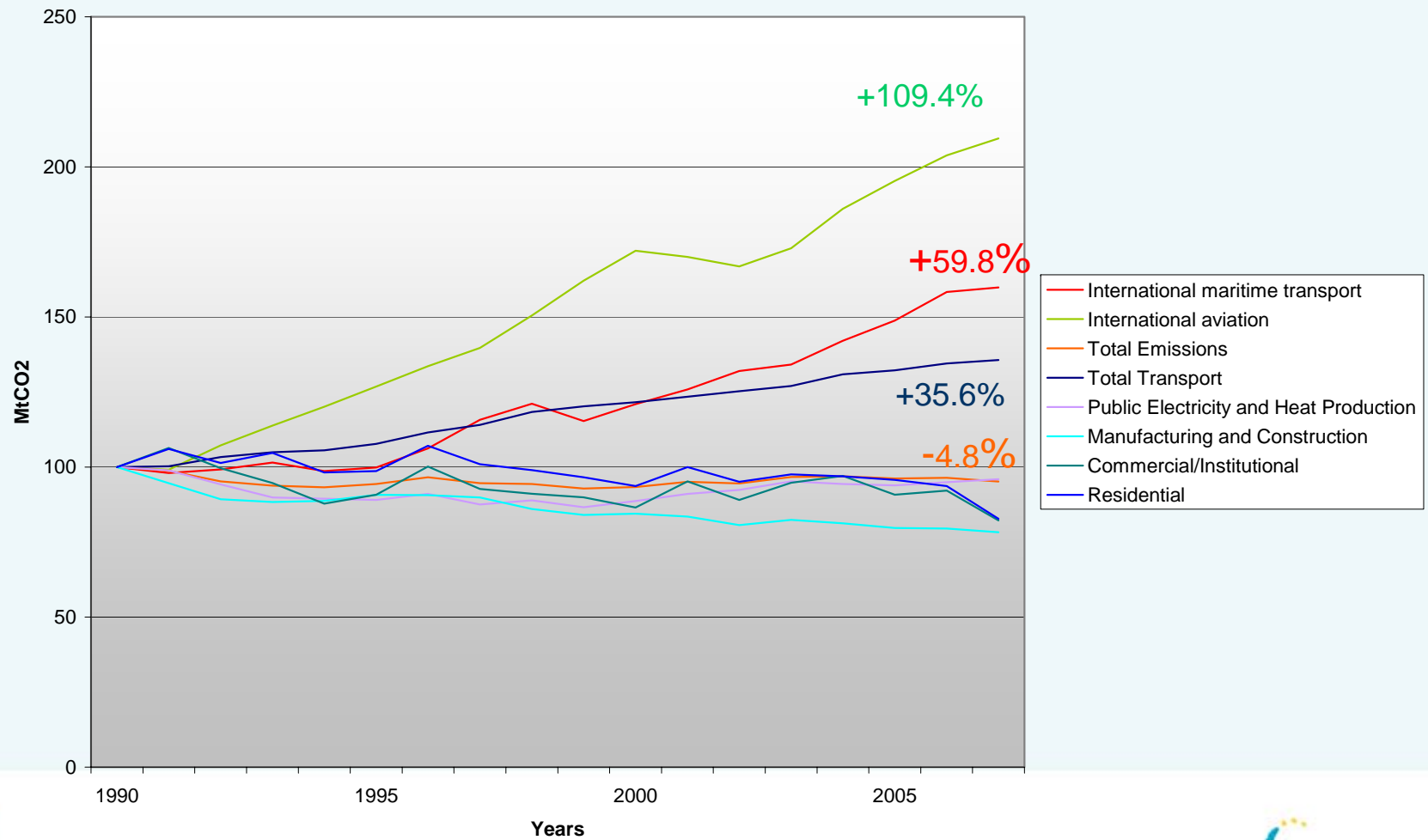
... which undermines the EU efforts

Variation of the GHG emissions from the EU and the international maritime sector between 1990 and 2007



Source: EU energy and transport in figures - Statistical pocketbook 2009, DG TREN

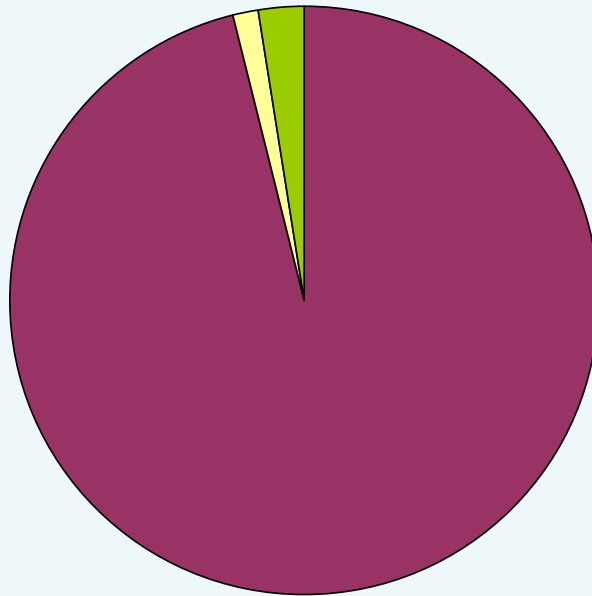
EU 27 CO₂ Emissions by sector



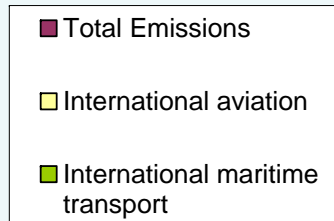
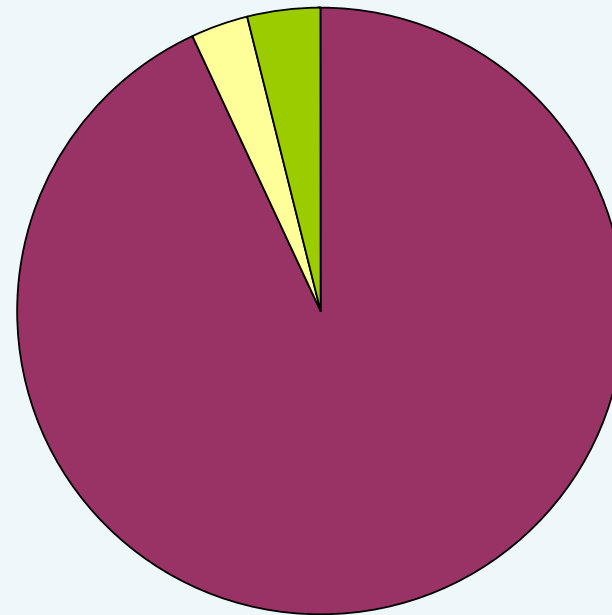
All sectors covered, except international shipping

5

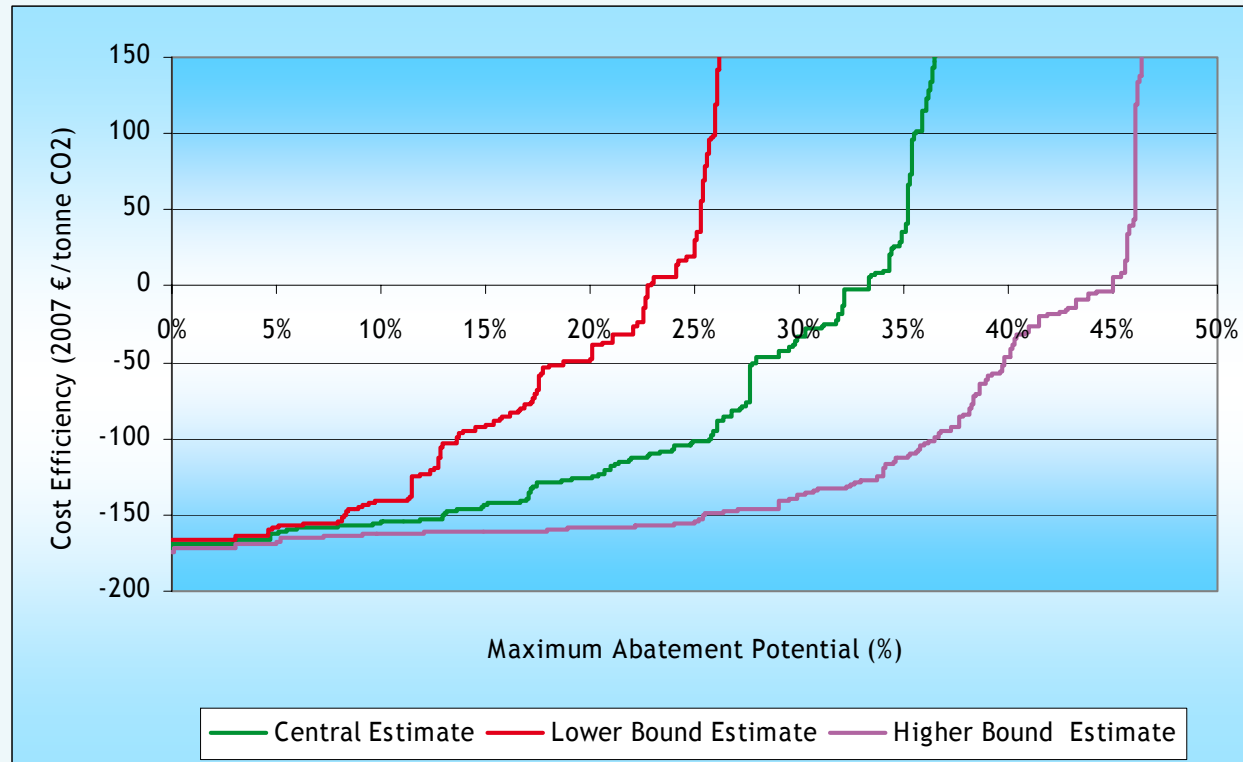
1990



2007



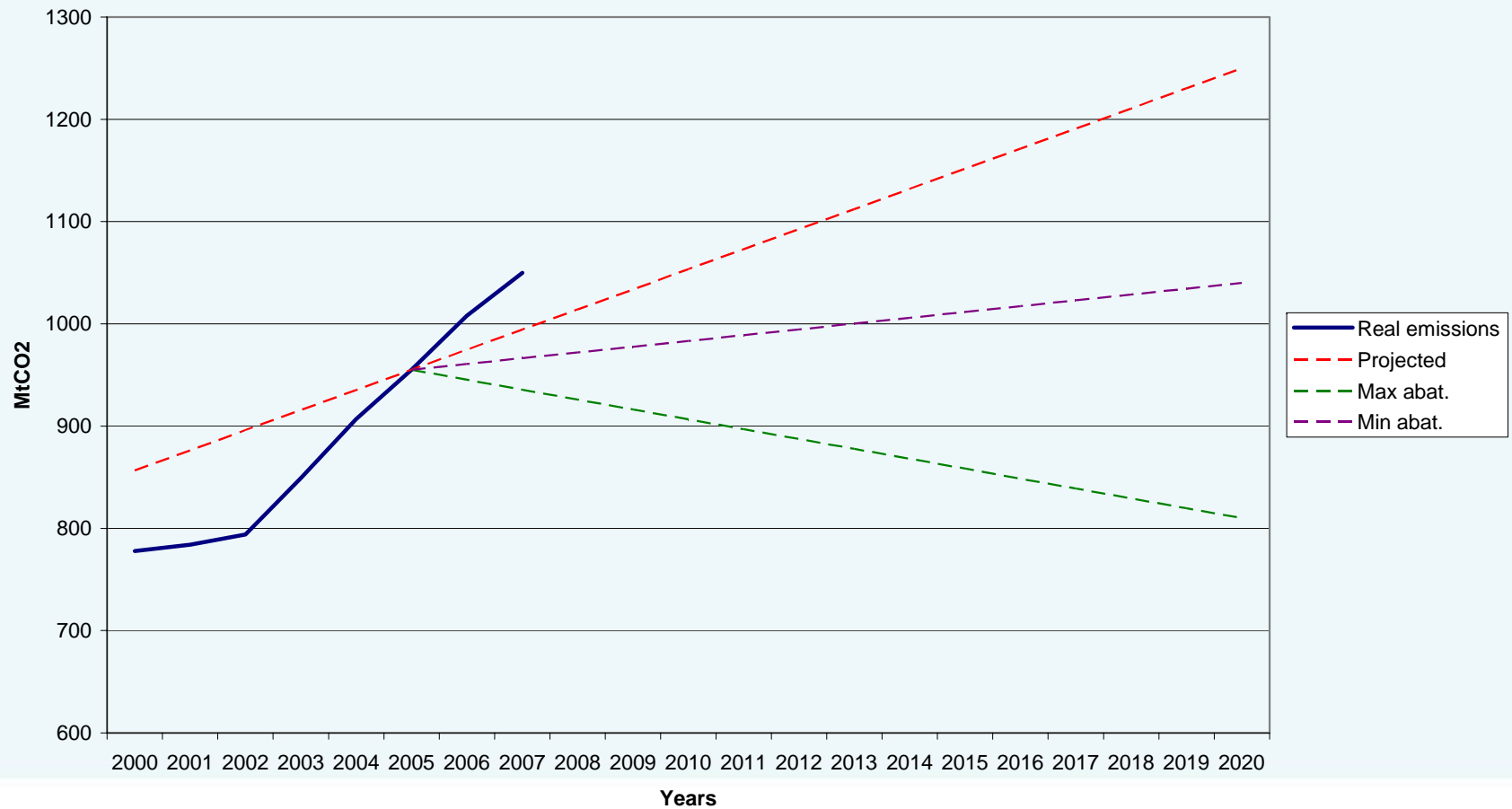
Several studies on MACC



Marginal CO₂ Abatement Costs for the Maritime Transport Sector in 2030 relative to frozen-technology scenario, Range of Estimates, US\$ 700/tonne fuel, 9% Interest Rate
Source : 2009 CE Delft

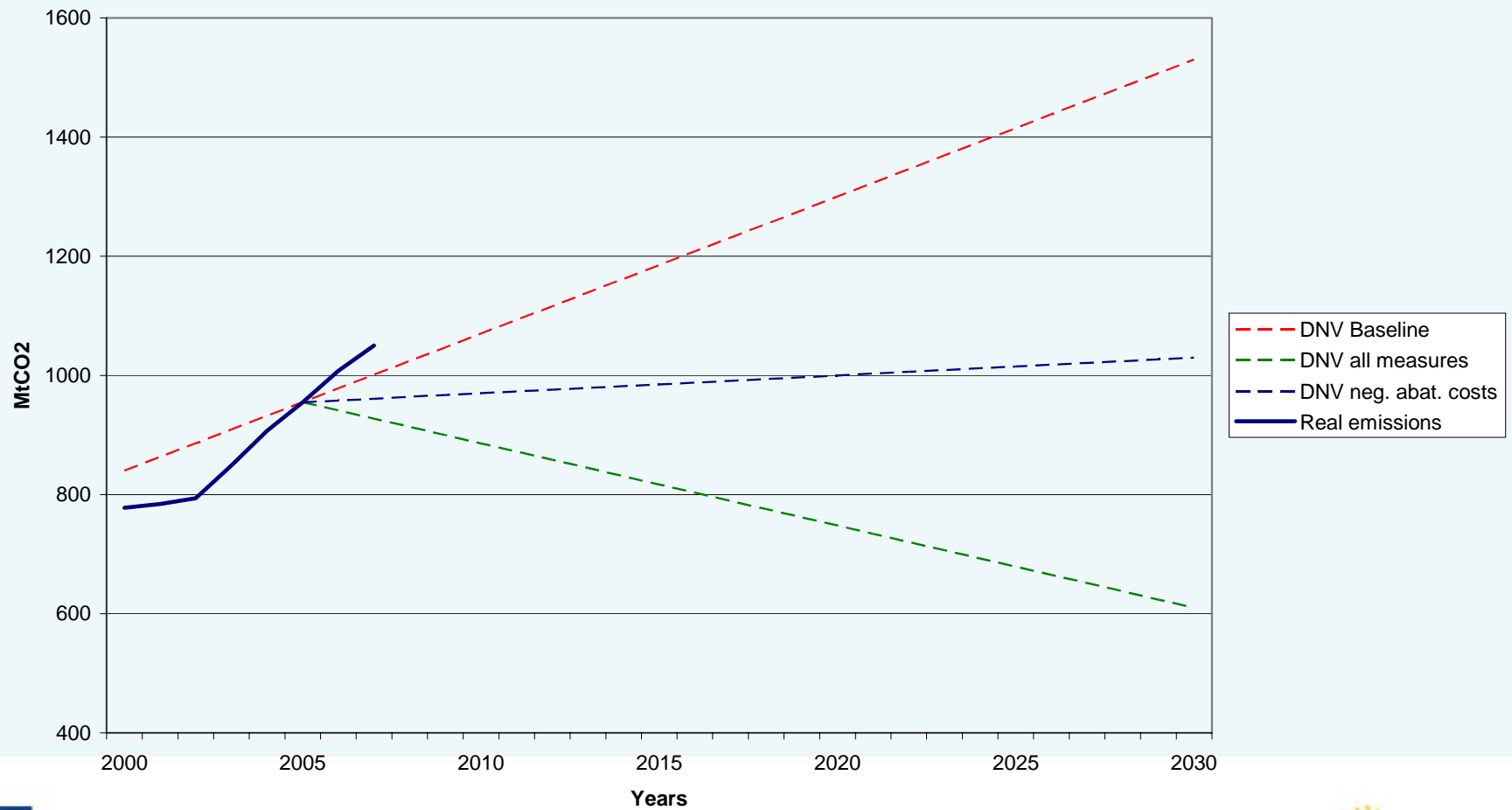
Impact of the IMO MACC

IMO MACC for global shipping compared to 2005



Impact of the DNV MACC

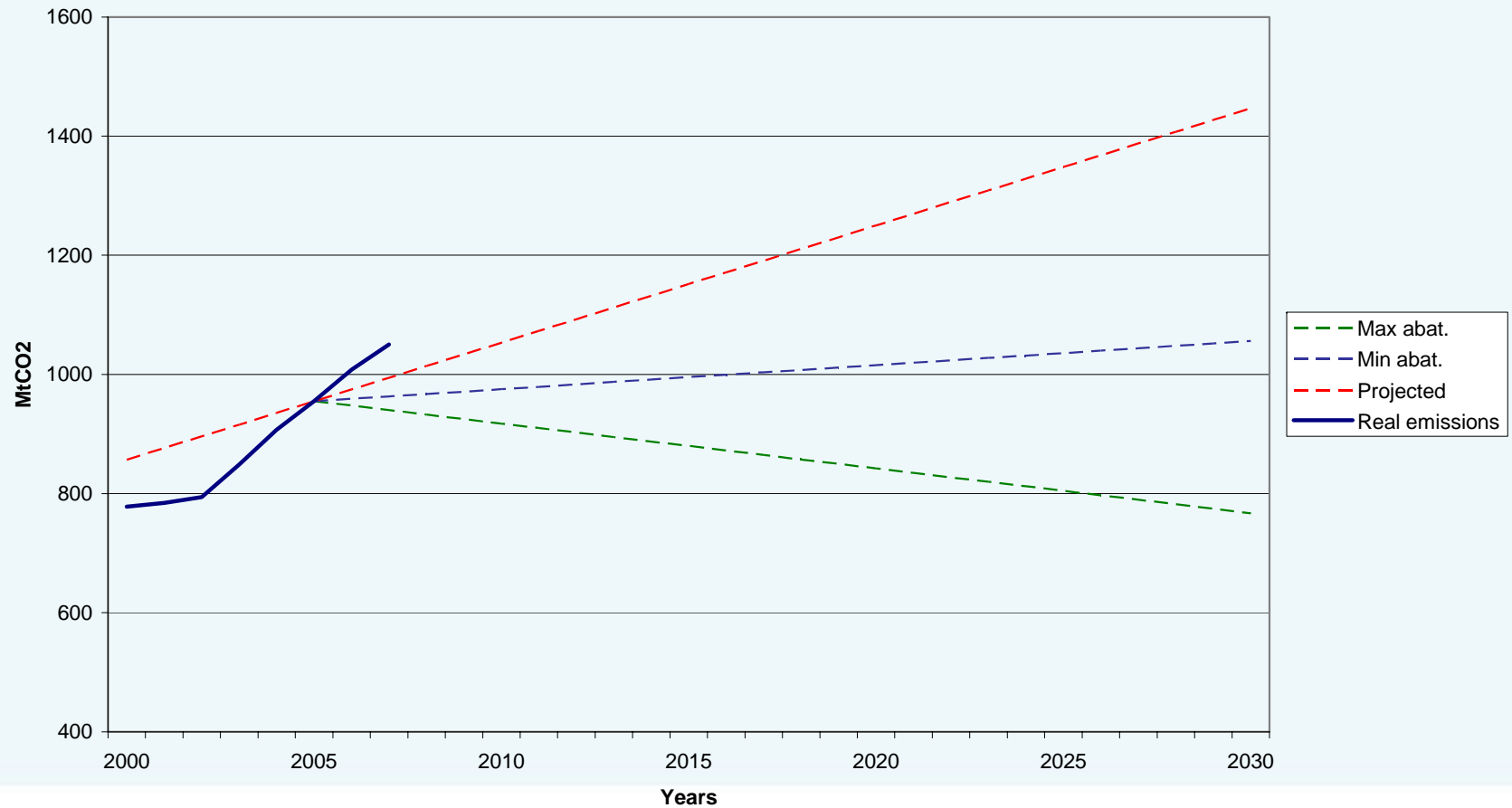
DNV MACC compared to 2005 global shipping emissions



Source: DNV, February 2010

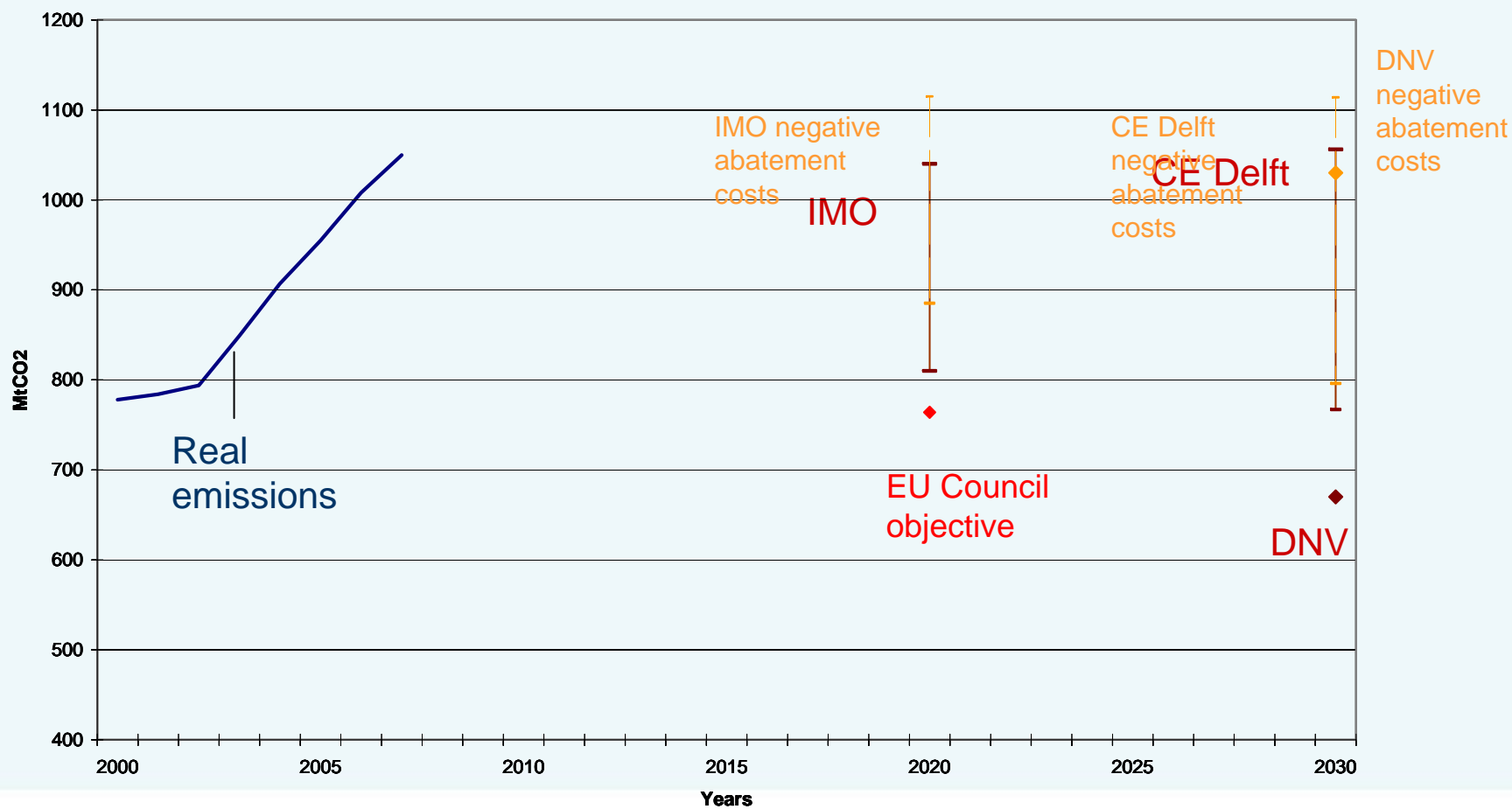
Impact of the CE Delft MACC

CE Delft MACC compared to 2005 emission for global shipping

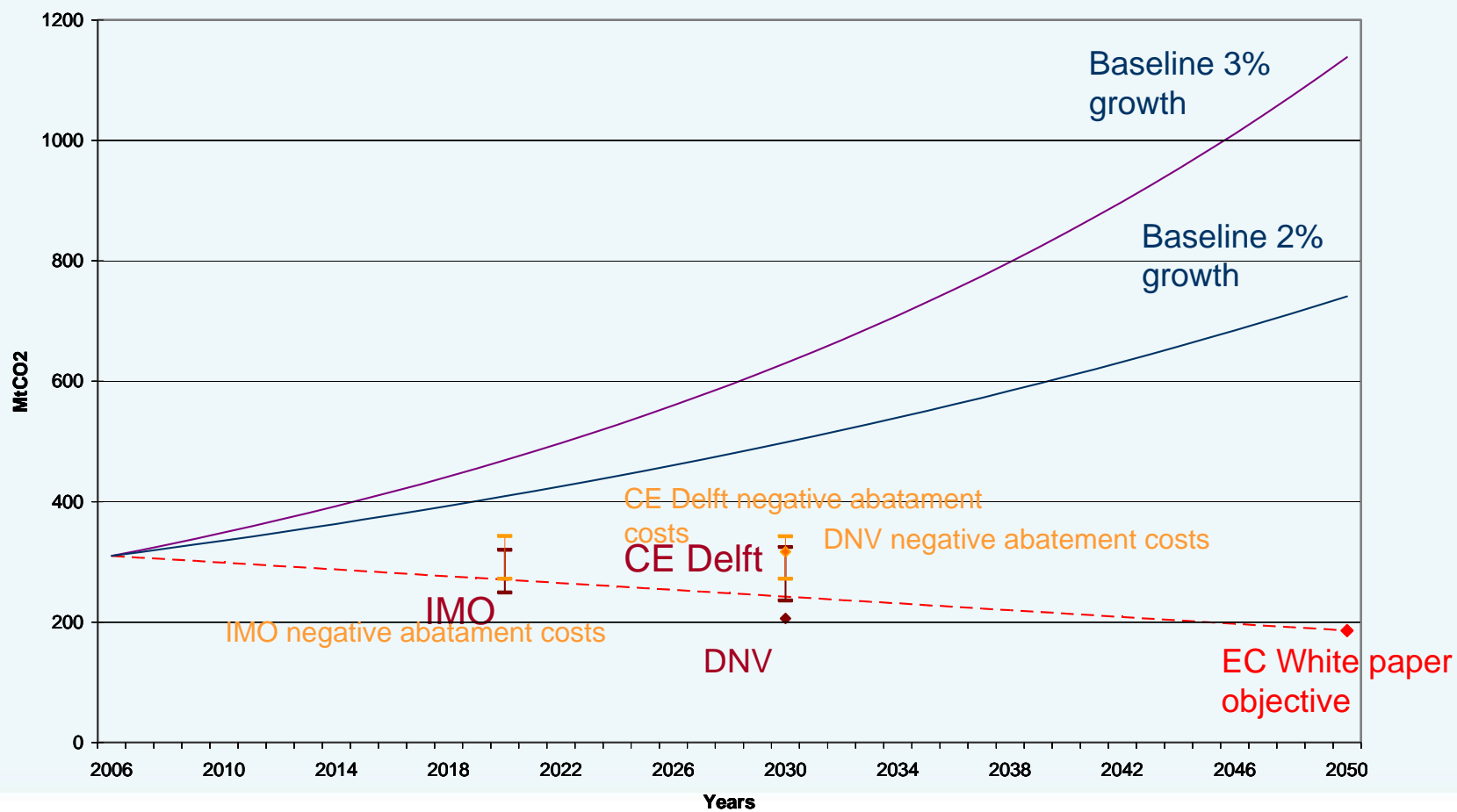


Source: CE Delft, December 2009

Summary at the global level



Extrapolation at the EU level

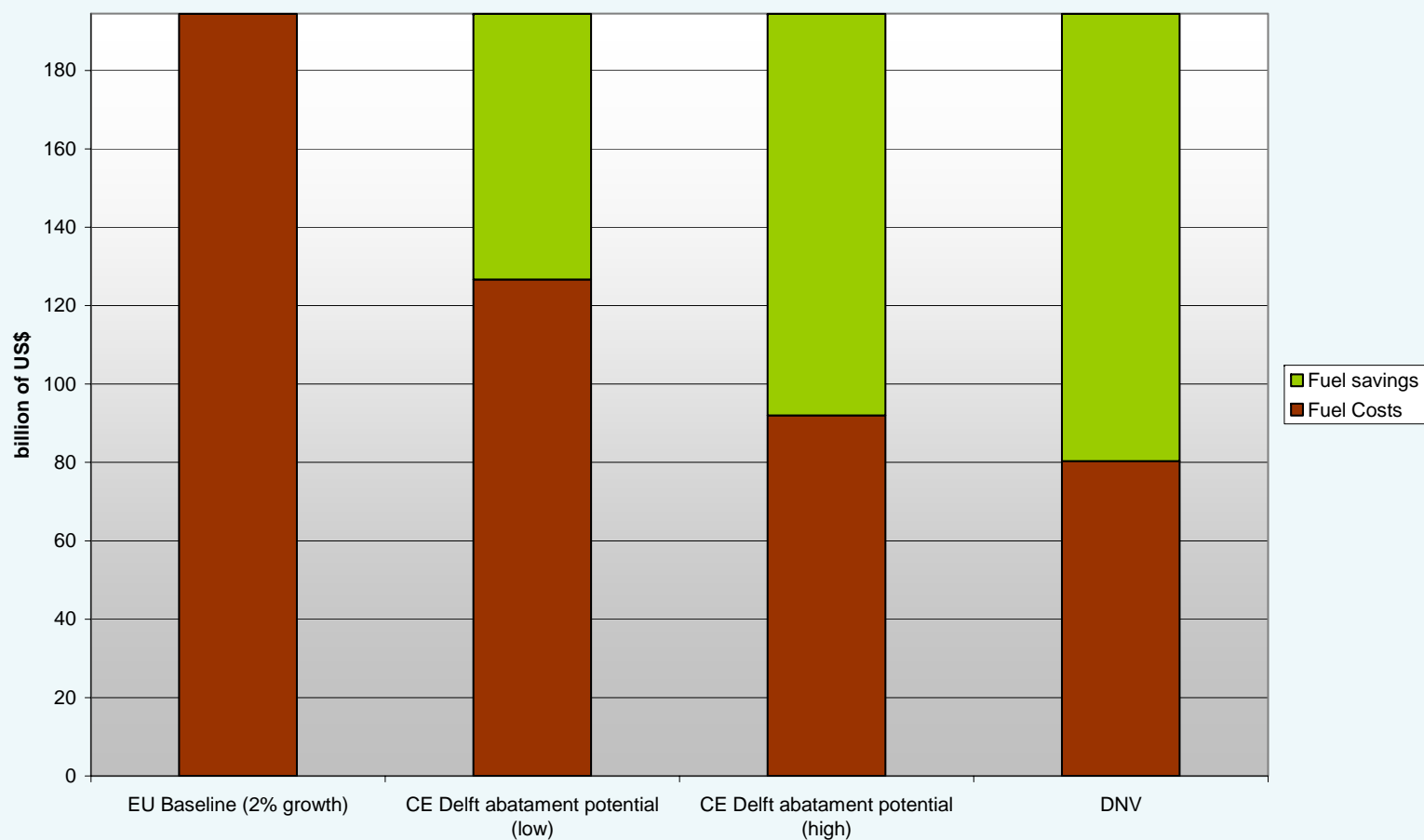




Net benefits of the abatement potentials

- Implementing the EEDI and the SEEMP :
 - US\$ 34 – 61 billion of annual fuel cost savings by 2020
- Implementing the maximum abatement potential of measure whose cost effective is negative :
 - US\$ 46 - 125 billion of annual fuel cost savings by 2020 (IMO figures)
 - US\$ 195 billion of annual fuel cost savings by 2030 (DNV)
 - US\$ 130 – 254 of annual fuel cost savings by 2030 (CE Delft)

Net benefits in case of EU measures



Sources: LR/DNV November 2011, Second IMO GHG study 2009, DNV February 2010 and CE Delft December 2009