

IFIEC Energy Forum 2013
Competitiveness of European EII in a globalised economy

Session III – Climate

Steel perspective

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Issues

1. Global competitiveness of the EU steel industry
2. Impact of EU climate policy on steel's global competitiveness
3. Mitigation potential of the EU steel industry
4. European steel as a CO2 mitigator
5. Elements for a sustainable EU climate and energy policy

1. Global competitiveness of the EU steel industry

- Steel is one of the most traded goods in the world
- Trade intensity of EU steel industry over 30%
- EU proportion global steel production shrinking from 22% to 11%
- Global steel production to grow by over 70% by 2050

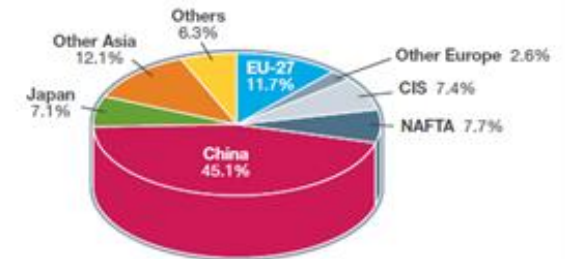
2001

Production:
World total: 851 million tonnes crude steel

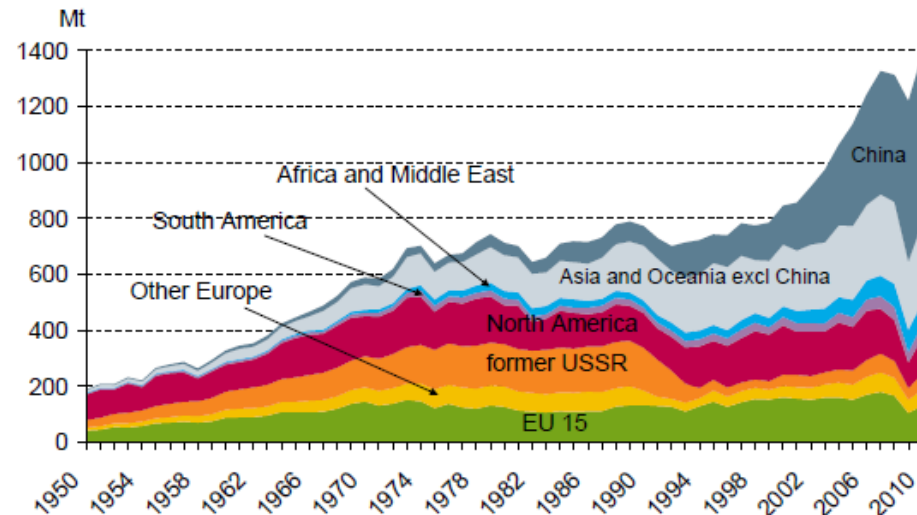


2011

Production:
World total: 1,518 million tonnes crude steel



Apparent crude steel use in 1950-2010



Source: worldsteel, SSY

1. Global competitiveness of the EU steel industry

Disadvantages	Advantages
Access to raw materials	Productivity
Labour costs	Skills
Energy costs	Efficiency
Protectionism by non-EU	Innovation
Regulatory costs	

1. Global competitiveness of the EU steel industry

Disadvantages	EU's possibility to do something about it
Access to raw materials	X
Labour costs	
Energy costs	X X
Protectionism by non-EU	X X
Regulatory costs	X X X

2. Impact of EU climate policy on steel's competitiveness

Costs of EU climate policy really matters

- Costs of CO₂ (direct and indirect)
 - 2 tCO₂ per tonne of primary steel
 - 0.5 tCO₂ per tonne of secondary steel
- Costs of renewable energies

Example:

- € 500 average sales price per tonne of steel
- 10% net profit margin in good times
- 0% net profit margin or negative in bad times (e.g. 2012)

- **At profit margins between €0 and €50 a CO₂ price of €3 or €30 has a real negative impact.**
- **Current climate policy creates uncertainty and frustration in industry, and keeps investment away**

2. Impact of EU climate policy on steel's competitiveness

Climate policy costs 2005 to 2012

- Due to crisis and unused allowances no direct costs for most companies
- This is by pure chance as crisis was totally unforeseen

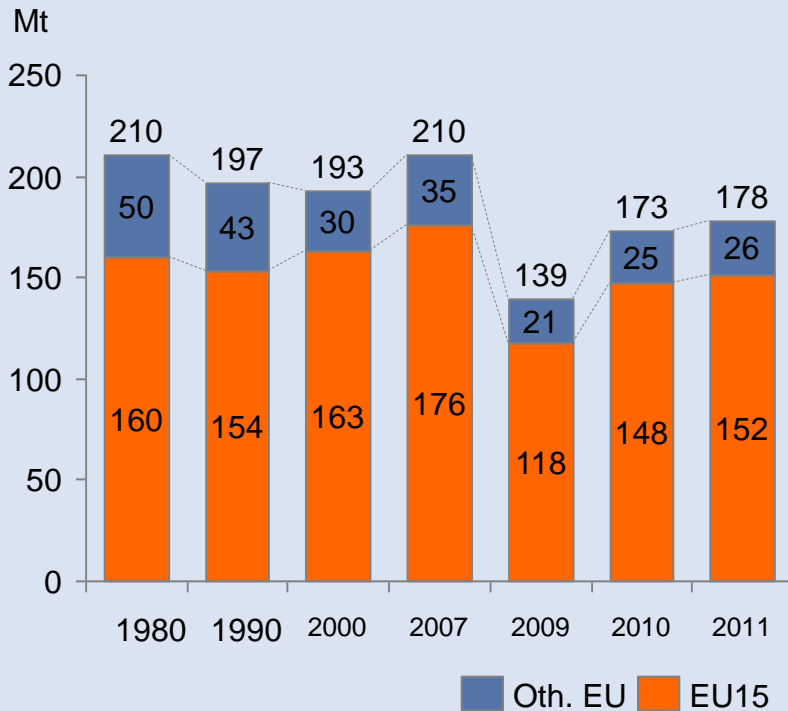
- **But** high indirect costs (CO₂-cost pass through by power sector): substantial costs in particular for electro-intensive steel scrap recycling (Electric Arc Furnace route) due to carbon price (even if relatively low) and RES policies

Future climate policy costs - Problem will become massive when

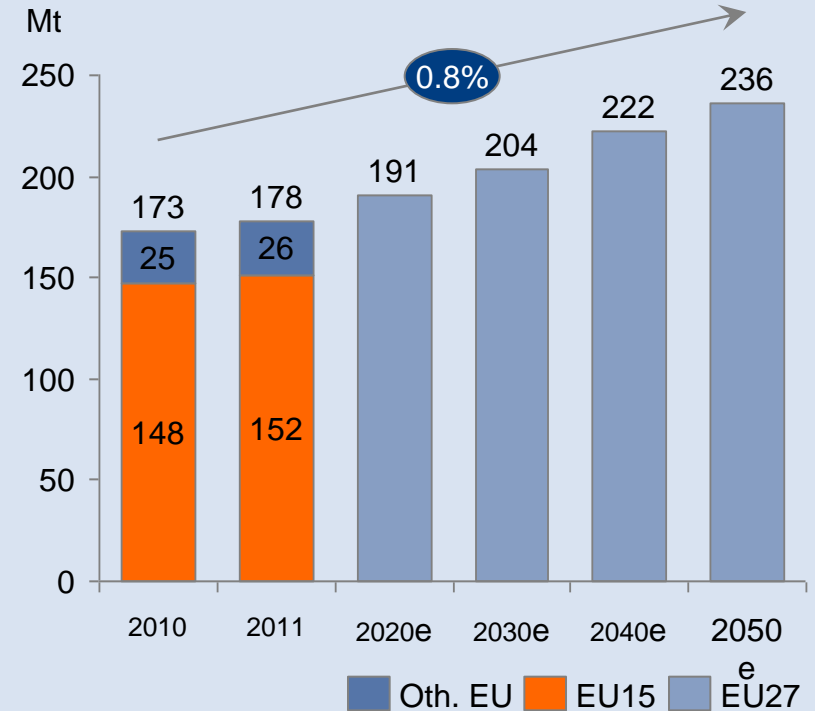
- Economic crisis is over and steel consumption grows
- Unused allowances are used up
- Carbon price will raise
- Correction factor cuts free allocation
- No free allowances post 2020 according to current ETS legislation (only 25% of the benchmark as free allocation in 2021 going down to 0% in 2027)

Moderate annual crude steel production growth of 0.8% from 2010-2050 expected **if conditions are right**

Historically, crude steel production stable in EU15 but declining in Eastern Europe

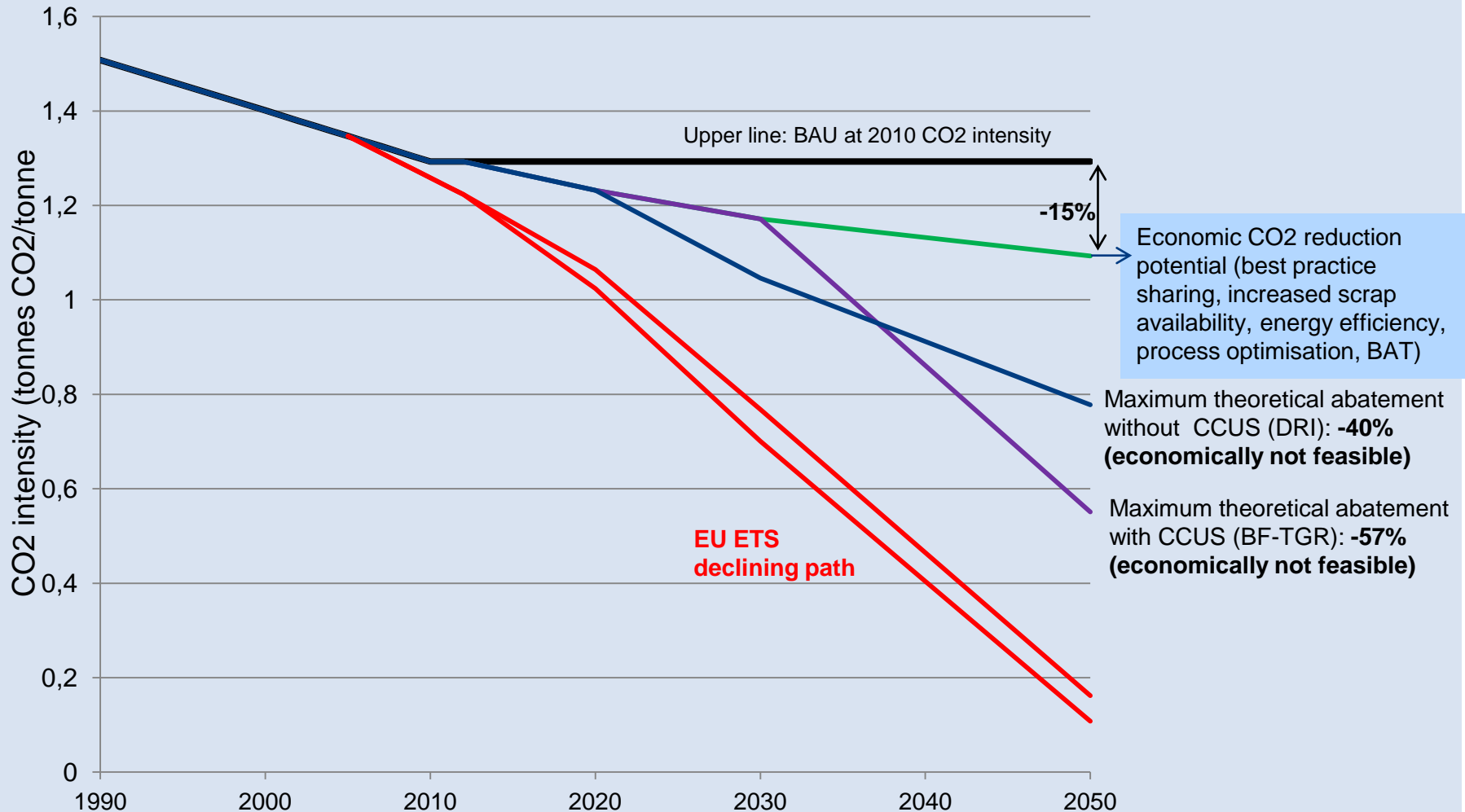


Going forward, slow growth expected for EU27, 2007 production level will be reached in 2032



Note: e = estimate.
Sources: World Steel Association; BCG analysis.

3. Mitigation potential of the EU steel industry



Emission reduction potentials are expressed in specific CO2 emissions relatively to 2010

3. Mitigation potential of the EU steel industry

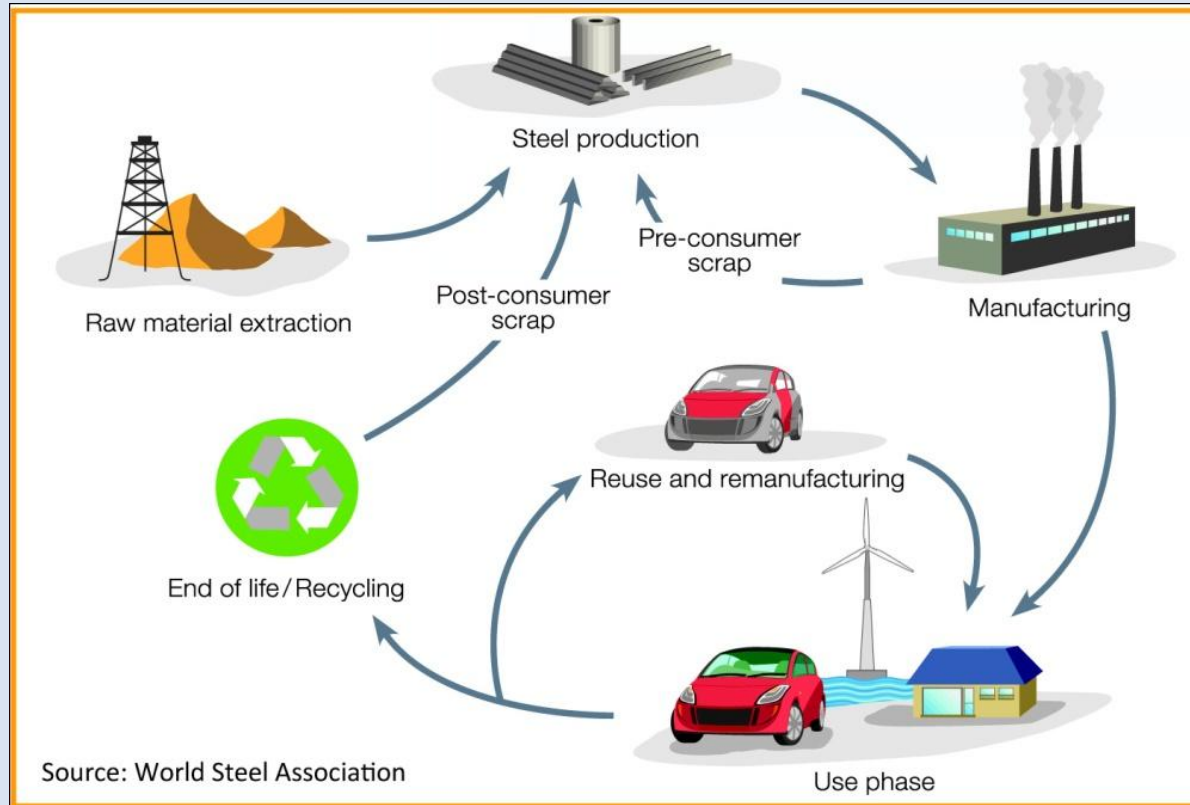
- 1990 – 2010 EU steel industry reduced total CO₂ emissions by **25%**
- 1990 – 2010 EU steel industry reduced CO₂ emissions per tonne of steel by **14%**

Results of study by The Boston Consulting Group and Steel Institute (2013):

<i>CO₂ per tonne of steel compared to 2010</i>	2030	2050
Increased EAF share and best practice sharing scenario	-6%	-11%
Economic scenario	-9%	-15%
44% Scrap-EAF, 45% DRI-EAF, 11% BF-BOF scenario	-19%	-40%
CCUS scenario	-9%	-57%

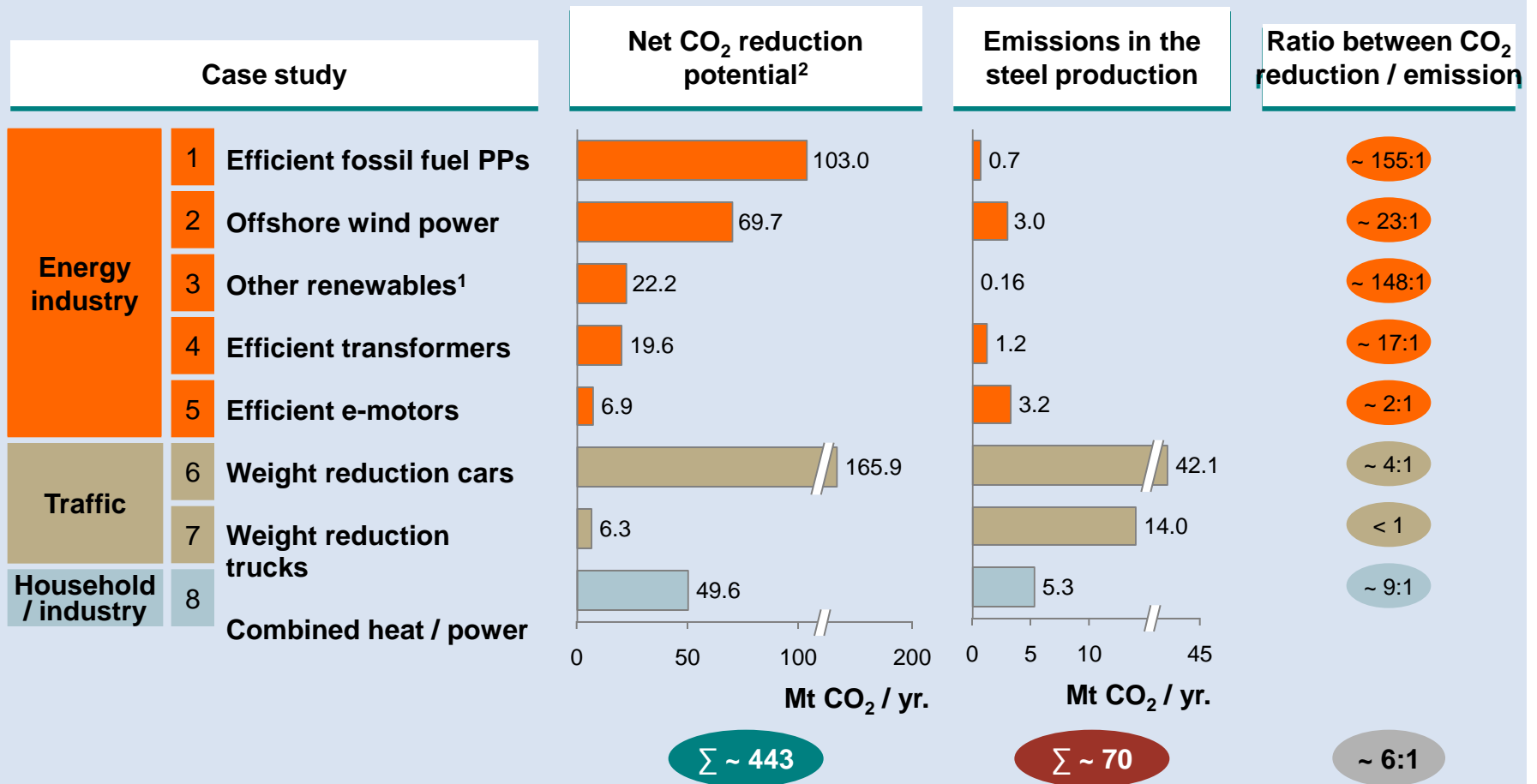
4. European steel as a CO2 mitigator

- Steel is a permanent material
- 100% recyclable without losing its properties
- Steel recycling massively contributes to CO2 mitigation



4. European steel as a CO₂ mitigator

- Case studies for EU27 result in annual CO₂ savings of ca. 440 Mt – over double of total direct emissions from EU steel production



1. Bioenergy . 2. Net reduction refers to reduction attributable to steel.

Note: PP = power plant

Source: BCG analysis

5. Elements for a sustainable EU climate & energy policy

Quick fix of ETS with backloading or structural measures is damaging

EU needs to focus on reform post-2020 now !

A right 2030 energy and climate framework is crucial.

Recommendations

- Targets need to be technically and economically feasible (“bottom-up”)
- Best performers must not incur any direct or indirect costs
- Globally competitive energy prices are conditional to decarbonisation in Europe
- Set target to decrease gap in industrial energy prices between EU and its competitors
- Member States to provide low-carbon infrastructures (e.g. CCS)
- Increased support for R&D, pilot, demonstration, and market application
- Without comprehensive international agreement EU needs to rethink unilateral targets
- Future policies must recognise the positive role materials such as steel play as CO₂ mitigator (integrated approach)

Europe needs a real policy for industry.

A policy for growth, jobs and innovation which other EU policies such as energy, climate and trade are part of and conditional on – and not vice versa

THANK YOU !