

Environmental (climate) dimension of the EEP

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Environmental dimension of EEP

- Energy sector (extraction, transport, processing and combustion) harms the environment significantly.
- Climate change (regional/global level) – measures to reduce GHG emissions.
 - EU ETS, GHGs outside of the EU ETS.
 - RES.
 - Energy Efficiency.
 - Research and development, new technologies (CCS).
- Local environment protection – covered mainly by EU environmental policy.
 - Air, land and water pollution, noise, light pollution.
 - Industrial (energy) waste.
 - Protection of biodiversity.
 - Extraction of non-conventional sources of energy.

Period between 1985 - 2000

New incentives for energy on the EC level.

- Weak competitiveness of European industry – first proposals to create the internal energy market. Competition and transparency instead of national monopolies and closed markets.
- Climate change – tools to prevent impact of usage of energy on local and global level. (to reduce the amount of emissions produced in the EU).
- Disintegration of Soviet block – proposals to manage relations between producers and consumers (EU MS) of energy.

Environmental dimension of EEP

Two interlinked (but not identical) processes:

- International regime of climate change mitigation (EU plays a significant role).
- Interlinked but independent climate policy of the EU (part of the EU energy policy).

International climate regime

- Intergovernmental Panel on Climate Change – 1988.
- Rio Summit on Earth – 1992 (UN Conference on Environment and Development) → UNFCCC.

= Political consensus on the climate change as well as the contribution of human activities to this process.

- Kyoto protocol.
- 1997, in force 2005.

Kyoto protocol

- 4 GHG (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride) + hydrofluorocarbons and perfluorocarbons.
- Annex I. parties (37 industrialized countries + EU15), Non-annex I. parties.
- Reducing of GHG emissions by 5,2 % for the period of 2008-2012. (4,2 % after USA left). Base year 1990.
- Flexible mechanisms – Emission trading, CDM, JI.
- Art. 4 – burden sharing agreement of European Community.
- Common but differentiated responsibility.

Table of quantified emission limitation or reduction commitments for the purpose of determining the respective emission levels allocated to the European Community and its Member States in accordance with article 4 of the Kyoto Protocol

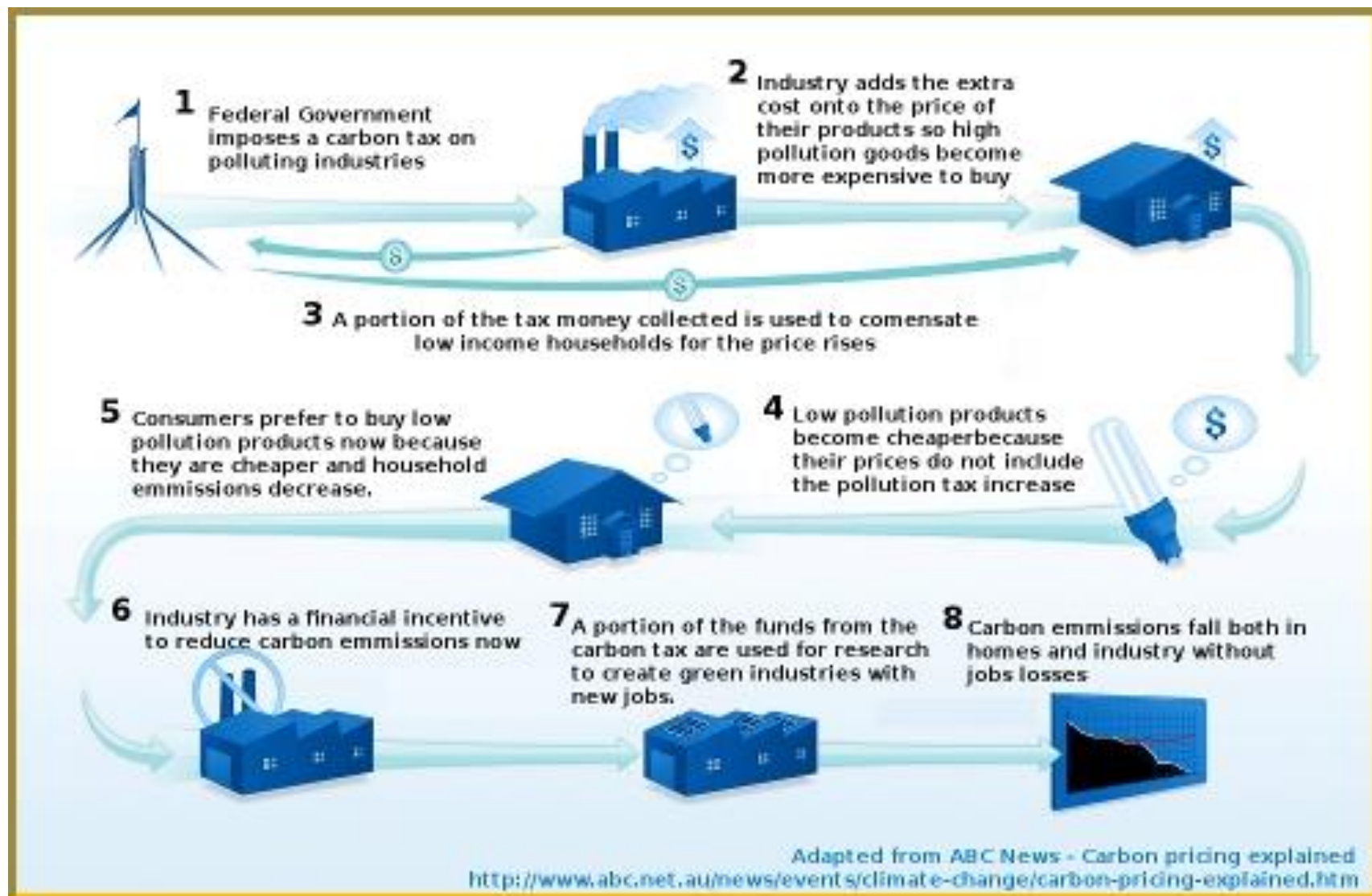
	Quantified emission reduction commitment as laid down in Annex B of the Kyoto Protocol (percentage of base year or period)
European Community	92 %
	Quantified emission limitation or reduction commitment as agreed in accordance with article 4(1) of the Kyoto Protocol (percentage of base year or period)
Belgium	92,5 %
Denmark	79 %
Germany	79 %
Greece	125 %
Spain	115 %
France	100 %
Ireland	113 %
Italy	93,5 %
Luxembourg	72 %
Netherlands	94 %
Austria	87 %
Portugal	127 %
Finland	100 %
Sweden	104 %
United Kingdom	87,5 %

EU and climate change

- Environmental awareness.
- Preemptive environmental measures.
- Common market.
- Cross-border cooperation.
- Raison d'être.

130r (TEU) „...Community policy on the environment...shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified as source and that the polluter should pay“.

EU and climate change: carbon tax



Emission trading

- EU firstly sceptical about international emission trading.
 - See it morally wrong – trading authorizes pollution, turning it into commodity to be bought and sold.
 - Questionable with regard to equity – that the richer industrialized countries can buy their way out of their obligations instead of lowering their disproportionate consumption of scarce sources.
- But – change in the position of the U.S. placed the EU in the forefront of the climate change movement.

EU and climate change: emission trading

ET: Central authority ... sets a limit ...on the amount of pollutant to be emitted ... the cap is sold/allocated as permitscompanies are required to hold those permits ...if they need to increase this volume...have to buy those permits or pay the fee.

= the buyer is paying a charge for pollution = he is motivated to invest in less-polluting technologies.

= in areas where emission could be easily measured, reported, and verified.

How the system works?

- It creates a dynamic monetary incentive so companies can sell their allowances to other producers and make profit.
- These incentives are based on real needs (scarcity) of allowances and on adequate monitoring and enforcement.
- This system (at least in theory) offers certainty of emission reduction corresponding to the stringency of the cap.
- Unlike domestic schemes, effective international systems are more difficult to establish.
- Even a well-designed system is not to work if it is not implemented correctly by the participants in the system (MS).

Run-up to the EU ETS

- 1988 EC's communication „The Greenhouse Effect and the Community“.
- 1998 EC's communication „Climate Change - Towards an EU post-Kyoto strategy“.
- 1999 EC's communication „Preparing for Implementation of the Kyoto Protocol“.
- 2001 – EU ETS legal preparation launched, approved in 2003.
- Designated the first period from 1.1.2005 to 31.12.2007, covering about 11.500 facilities in 25 MS = 45% CO₂ emitted in the EU.

EU ETS: The first phase 2005 - 2007

Country	Mil. EUAs	Share of the overall amount of EUA	Number of incl. facilities	The aim of Kyoto
Belgium	188,8	2,9	363	-7,5
Czech Republic	292,8	4,4	435	-8
Denmark	100,5	1,5	378	-21
Estonia	56,85	0,9	43	-8
Finland	136,5	2,1	535	0
France	469,5	7,1	1 172	0
Ireland	67	1	143	+13
Italy	697,5	10,6	1 240	-6,5
Cyprus	16,98	0,3	13	-
Luxembourg	10,07	0,2	19	-28
Lithuania	36,8	0,6	93	-8
Latvia	13,7	0,2	95	-8

Zdroj: Massai, 2012, s. 174

EU ETS: The first („Pilot“) phase 2005 - 2007

- Only CO₂ from power generators and energy intensive industries.
- Almost all allowances for free, penalty at EUR40/tCO₂.
- MSs responsible for cap setting. (NAPs submitted to EC for approval) - Absent historic verified emissions data, most MSs distributed allowances on the basis of estimated emissions.
- Overestimations of emissions – with the exemption of Germany and Slovenia (4 % surplus).
- Drop in the prices of allowances + very limited impact on emissions of GHG.
- NAP – only Austria, Denmark, Finland, Germany, Ireland and Slovenia in time.
- Banking not allowed, oversupply of 150 million of EUAs.

Figure 2: EU ETS emissions allowance prices: April 2005 - December 2009



EU ETS: The first phase 2005 - 2007

Difficult calculations due to:

- Proneness to cheating.
- Changing level of industrial production.
- Changes in energy prices.
- Increasing deployment of RES (canibalism of targets).
- Permit stockpiling.
- Weather.
- And others.

Not only GHGs decrease is desirable, but also the stability of the price of EUAs.

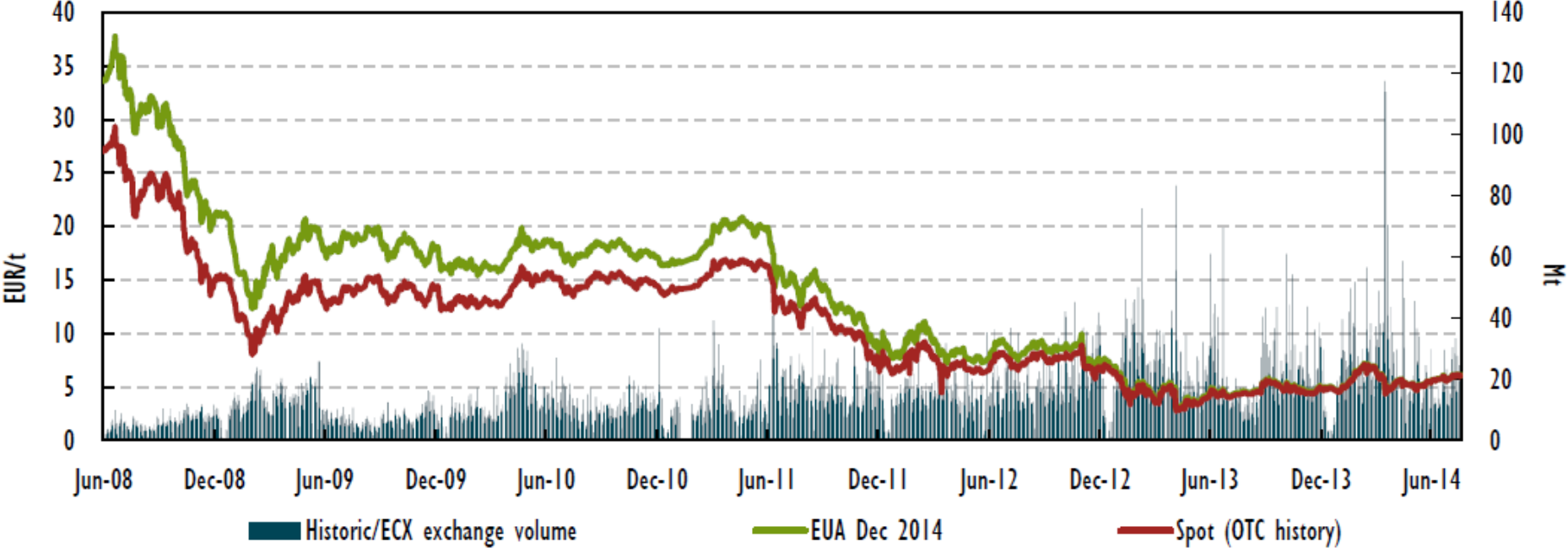
EU ETS: The second phase 2008 - 2012

- Cap lowered by 6,5% in comparison with 2005 production.
- Iceland, Liechtenstein, and Norway joined the EU ETS.
- Aviation added, but only for EU flights.
- Nitrous oxide emissions from the production of nitric acid were included by several MSs.
- The proportion of free allocation fell to around 90%, with several countries auctioning the remaining 10%.
- The penalty for non-compliance was increased to €100/tCO₂.
- Banking allowances from phase II to phase III was allowed.

EU ETS: The second phase 2008 - 2012

- More stringent approach of EC – cuts of NAP (litigation at ECJ), but still decentralized cap-setting. Overall number of EUAs reduced by 6,5% for this period.
- Relatively stable (but low) price of allowances.
- Pressure to change the whole system.
- *„Nearly all 25 EU MS did not meet the 30 June 2006 deadline for the submission of the second phase NAPs (only Estonia was on time). Preinfringement letters were sent by the EC to 14 MS, namely Austria, Belgium, Cyprus, the Czech Republic, Denmark, Finland, Hungary, Latvia, Malta, the Netherlands, Portugal, Slovenia, Slovakia and Sweden.“*

Historic evolution of volumes and spot prices for emission allowances under EU ETS

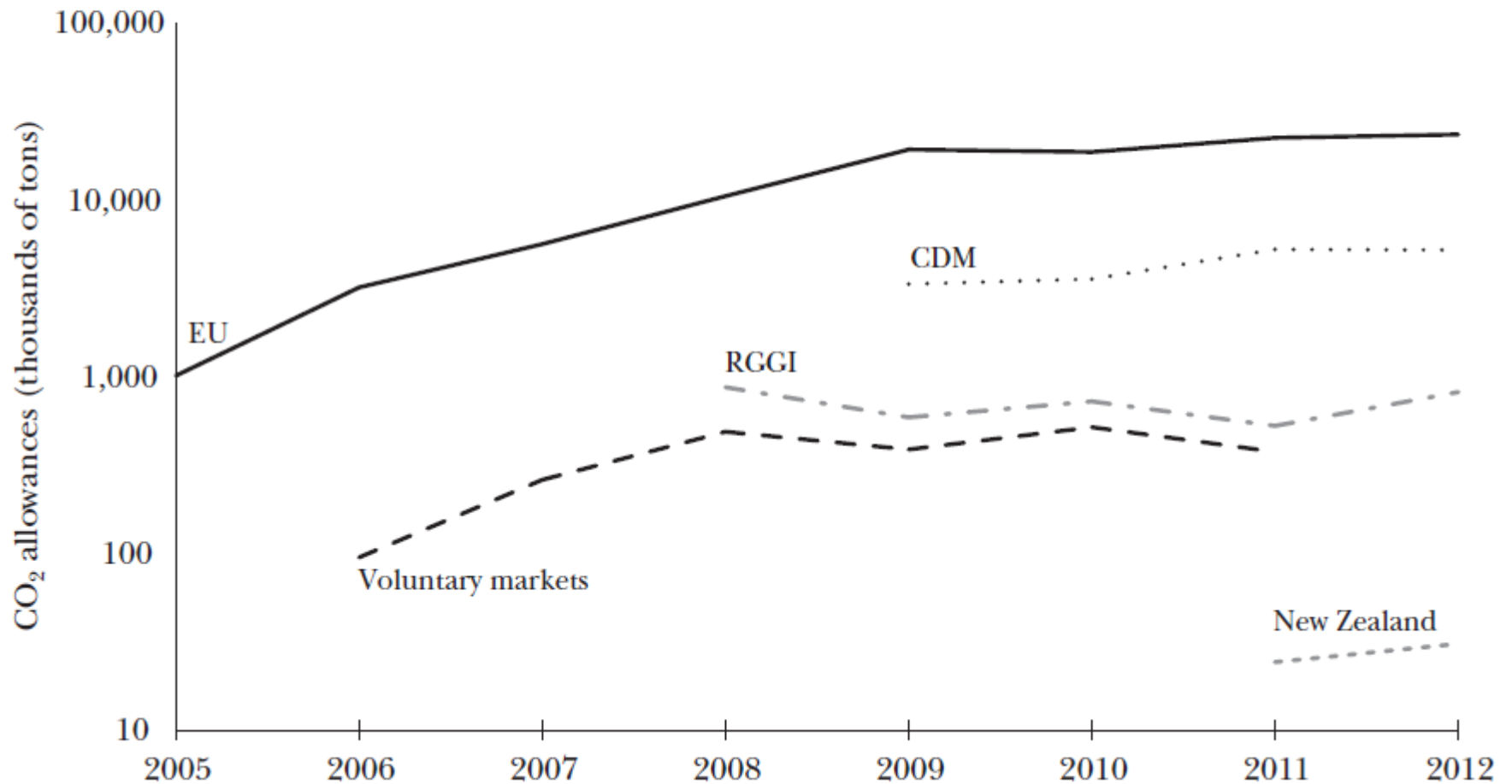


EU ETS: The second phase 2008 - 2012

- Between 2008 – 2012 the CO₂ price declined from around €20 MtCO₂ to around €8 MtCO₂.
 - The reduction of energy demand due to the financial and economic crisis starting in 2008.
 - Inflow of international credits (Certified Emission Reduction CER of CDM and others).
 - Impact of other EU policies such as RES and energy efficiency policy.
 - Rising prices of fuels.
 - The design of the EU ETS doesn't allow the adjustment of supply of EUA in reaction to the changes in demand.
- Since the banking is allowed between the second and third trading period = surplus of 2-2,5 bn EUA.

Volume of CO₂ Allowance Trades

(daily average)



Sources

- Linklaters (2014): Capacity mechanisms. Reigniting Europe's energy markets.