

Moving beyond a -20 % greenhouse gas target: Costs, benefits and policy options

Jan Nill

DG Climate Action, European Commission

Unit CLIMA A4 Strategy and Economic Assessment

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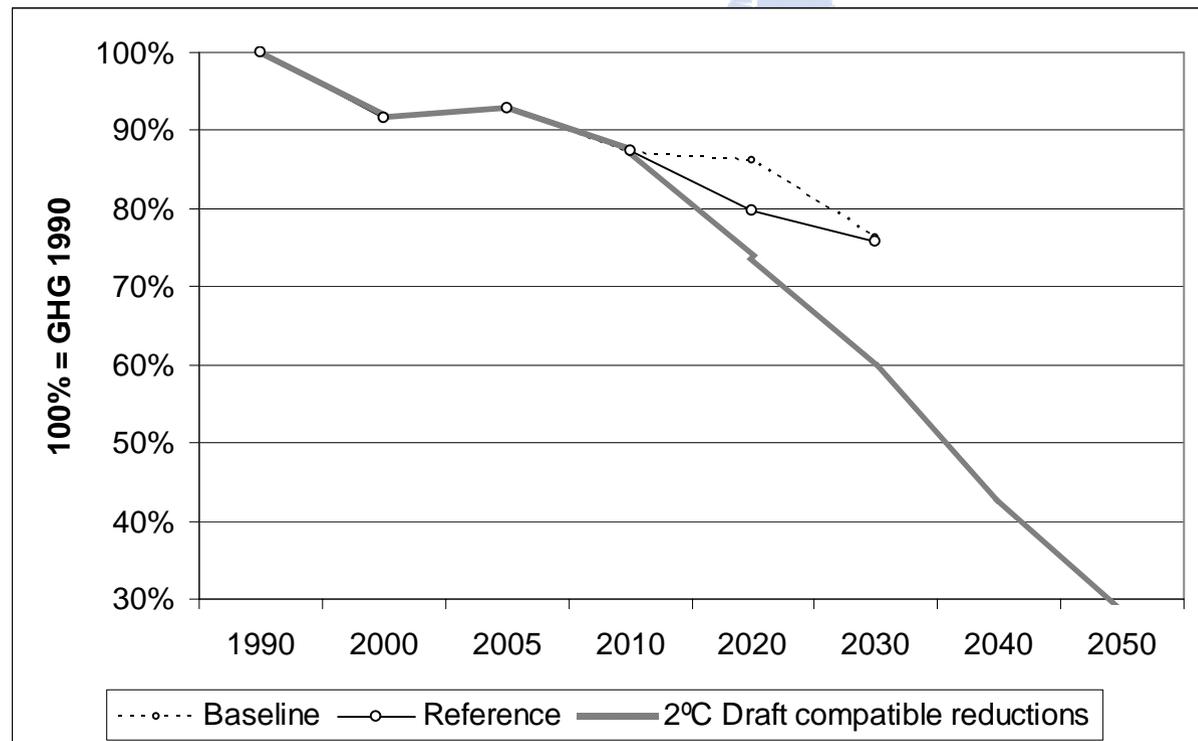
- EU has agreed a -20% and a conditional -30% greenhouse gas reduction target for 2020
- Copenhagen Accord confirmed 2°C target at global level (support covers >80% emissions)
- European Council: -80 to -95% by 2050
- Council asked European Commission to provide an updated analysis of the -30% target

- Economic crisis has changed the context
 - Not only important short term drop in GDP, but also still lower GDP in 2020 as projected two years ago
- ETS has worked as expected during the crisis
 - Carbon prices fell early 2009 from €25 to €8 and then slightly recovered to €12-15
 - Puts less strain on firms in difficult economic times
 - extended time horizon via EU-wide cap declining to 2020 and beyond stabilises carbon price

- EU greenhouse gas emissions are decreasing
 - -7% compared to 1990 in 2005,
 - -10% in 2008 and
 - -14% in 2009 (preliminary estimate)
- EU -20% target by 2020: Gap is narrowing
 - Updated baseline projection: -14% in 2020
 - including implemented policy measures (e.g. ETS, CO₂ and cars), but not RES and non-ETS targets

EU GHG emissions in a longer term perspective

- A -30% target would smoothen EU path to 2050 goals, i.e. cuts by 80-95% compared to 1990



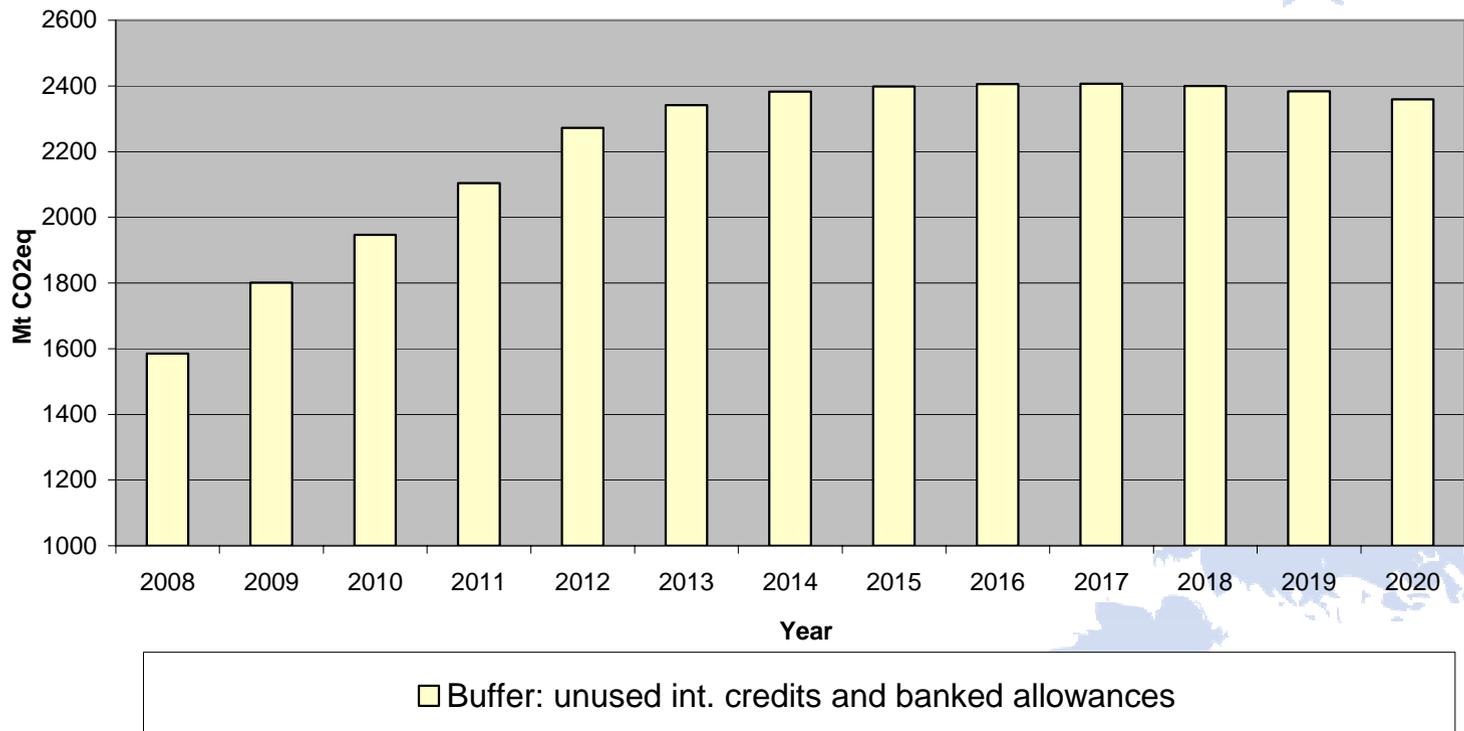
Cost impacts Climate and Energy package

- 2008 projections for 2020:
 - ETS price estimate = € 30 / allowance (2005 prices)
 - ETS GHG emissions = -13% below 2005

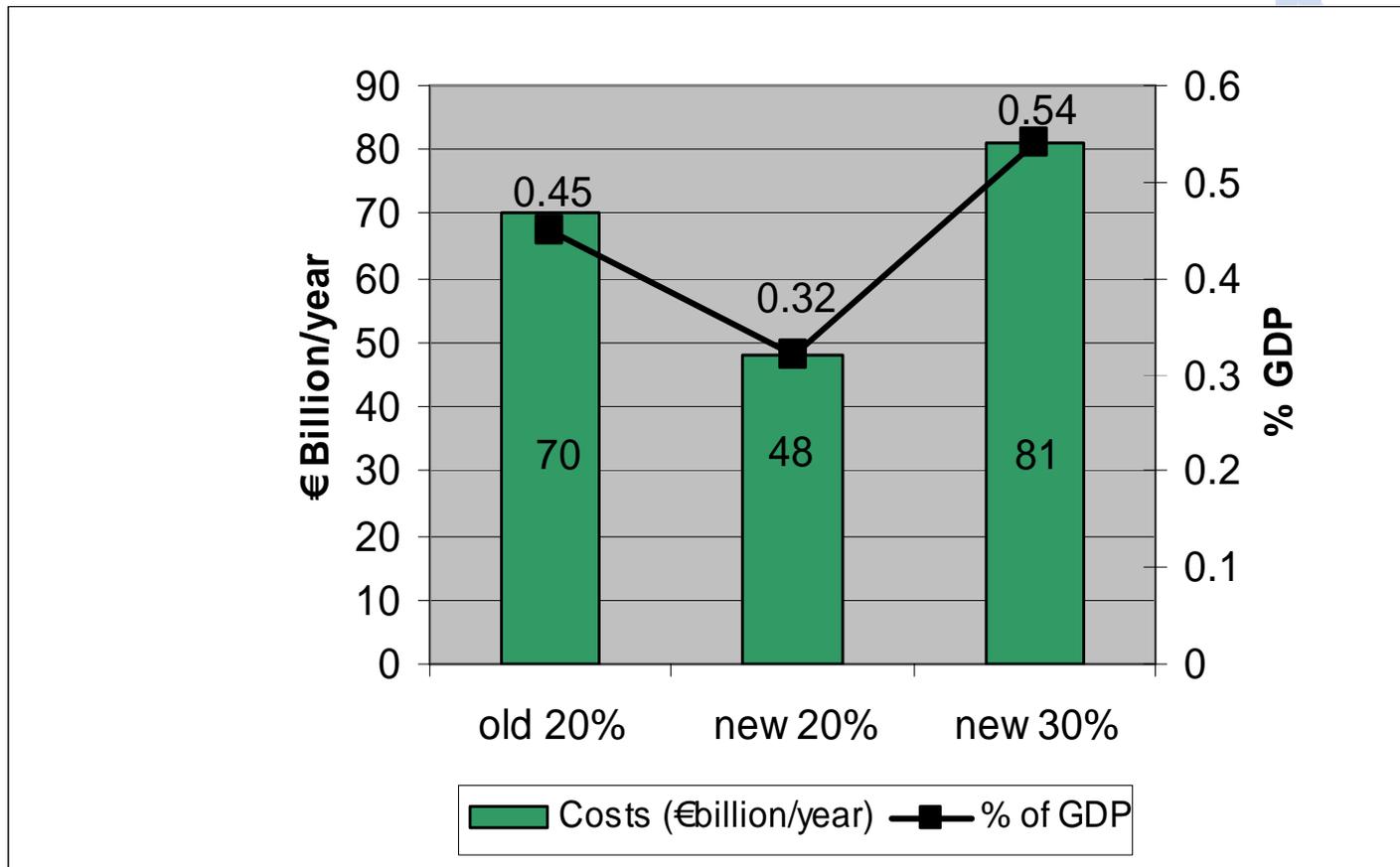
- 2010 projections for 2020:
 - ETS price estimate = € 16.5 / allowance (2008 prices)
 - ETS GHG emissions = -19 % below 2005
 - Drivers: economic crisis, higher fuel prices, banking

- ETS drives innovation less
 - Carbon price cannot drive CCS deployment

Buffer of unused allowances and credits



- Extra costs have fallen



Price and employment impacts of a move to -30%

- Average electricity prices increase by 5%
- Small impact on employment: -0.3% to +0.7% in 2020 (depending on instruments)
- Net employment effects could be positive if ETS auction/ carbon tax revenues used to reduce labour costs
 - In best case over one million more jobs

Benefits of a move to -30%

- Restores incentive to innovate and strengthens EU position in low carbon technologies
 - Improves energy security (e.g. reduces imports of oil and gas by €40 billion in 2020),
 - Reduces air pollution, cuts control costs by €3 billion/year and delivers health benefits (up to €8 billion/year)
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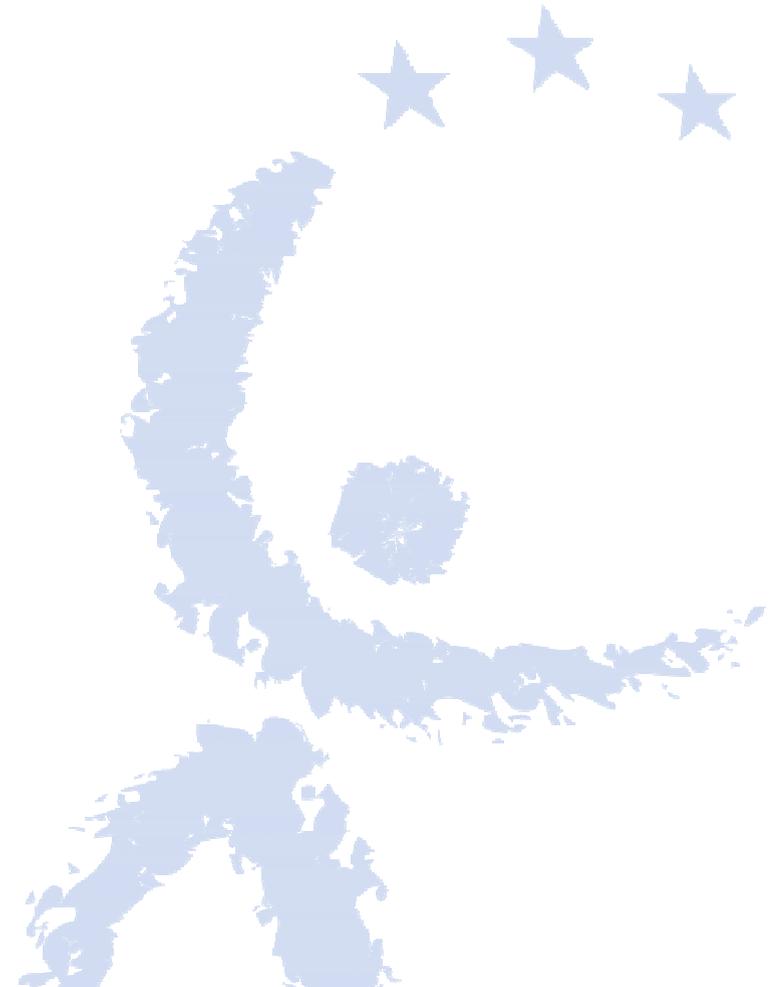
How to move beyond 20%

- European Council has defined conditionality and decides if and when a move is appropriate
- The EU should
 - prepare for a move to 30% and be ready to act
 - continue to encourage other countries
- Cost-effective split between ETS and non-ETS for -30% largely the same as for -20%
 - ETS: from 21% to 34% below 2005 emissions
 - Non-ETS sectors: from 10% to 16%

- Tighten ETS target by “setting aside” a share of the allowances foreseen for auctioning
- A 15% reduction over the period 2013-2020 = 1.4 billion allowances – could be sufficient
- Reinforces innovation incentives by expected effects on carbon price

- Innovation accelerator: Rewarding fast movers that invest in top performing technology
 - Use of ETS benchmarking system for identification
- Using EU policies to drive emission reductions (energy efficiency, standards, cohesion funds)
 - Demand side measures help to reduce cost in ETS
- Sectoral crediting to partly replace CDM
 - e.g. power sector advanced developed countries
 - could be linked to a multiplier for the use of conventional CDM credits

- Move from 20 to 30 % is a political decision for EU leaders when timing and conditions are right
- Commission analysis provides input for fact-based debate on the way forward
ec.europa.eu/environment/climat/climate_action.htm
- International context post-Copenhagen: need to strengthen pledges and to make them more transparent and operational
- Commission prepares low carbon economy and energy roadmap 2050 and scenarios for 2030



- Similar methodology as used in 2007/8 analysis
- Economic modelling based among others on
 - PRIMES energy system and CO₂ emission model
 - Complemented by GAINS non-CO₂ emission model
 - GEM E3 and E3MG macroeconomic models
- Costs covered start from energy system costs
 - Consumer perspective: all types of costs incurred in energy demand and supply sectors for all energy purposes, including energy savings, purchasing of high performance appliances etc.
- + non-CO₂ emission mitigation costs
- ETS auctioning revenues (used in wider economy)

- Technological options (e.g. product standards, energy efficiency measure)
- Energy Taxes in the non-ETS on products or fuels
- Cohesion funds, alternative to AAUs which would undermine the environmental integrity carbon market (post 2012)
- Common Agricultural Policy can give incentives for more sustainable practices, also for LULUCF activities
- Improve environmental integrity CDM & sectoral crediting
- maritime emission if no progress internationally
- Credits from REDD to partially fulfill reinforced targets

- Copenhagen Accord does not warrant any changes...
 - ... but all options – including border measures – remain on the table
- Despite reduced risk agreed measures remain justified
 - focus on implementation of these measures in the climate and energy package