



Climate Action

Energy for a Changing World

EU Climate Action



- EU GHG emissions today
- 20% target and adopted legislation
- The 30% target

- EU-15 target for 2008-2012: - 8%
- EU-15 - 1990-2008:
 - *GHG emissions: - 6,9%*
 - *GDP growth: +45%*
- EU-27 - 1990-2008:
 - *GHG emissions: -14.3%*
 - *GDP growth: +46%*

20% GHG reduction target:

- Equals -14% compared to 2005
- Multiple objectives: greenhouse gas emissions, energy saving and security, technological innovation, air pollution benefits, avoid lock-in of new carbon intensive investments
- Robust environmental integrity
 - 1990, not Kyoto base year
 - No surplus AAUs, no LULUCF
 - Includes bunker fuels (aviation)
 - Annual compliance cycle (ETS includes 100€ penalty)
 - Provisions for linking with other cap & trade systems

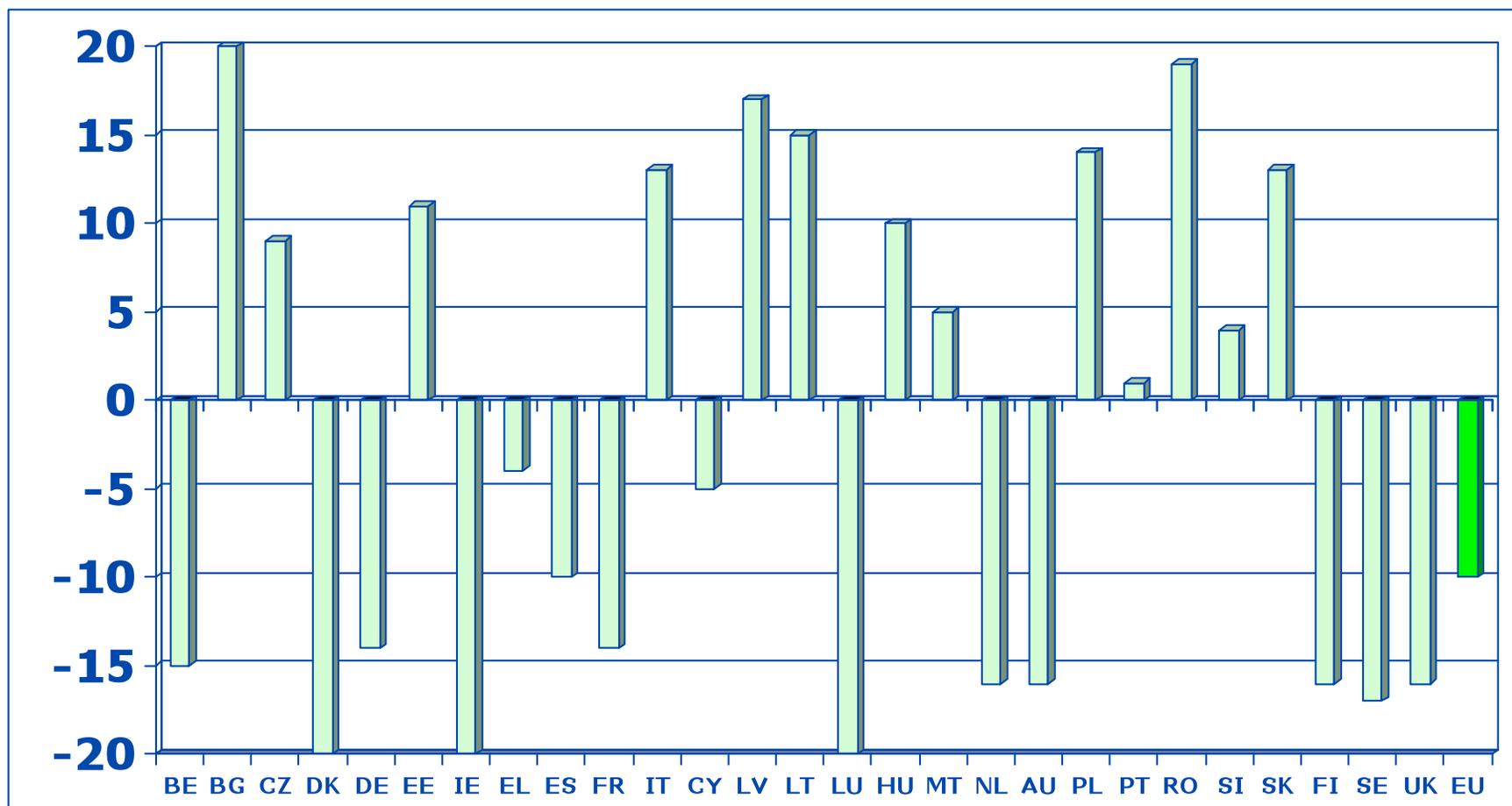
Cost-effectiveness: market based-instruments (EU ETS)
across EU

Fairness: differentiate efforts among Member States
according to GDP/capita

- national targets in sectors outside EU ETS
- national renewables targets (partially – half)
- redistribution of auctioning rights (partially – 10%, -2%)

- Covers $\pm 55\%$ of EU emissions
- "small emitters", not covered by EU ETS
- A diverse set of sectors: transport, heating in buildings, services & SME's, agriculture (N₂O, CH₄), waste (CH₄), HFC's
- Major differences in cost-effective emission reduction potential (eg. high for some non CO₂ emissions and buildings, low in transport)
- National, regional and local action very important

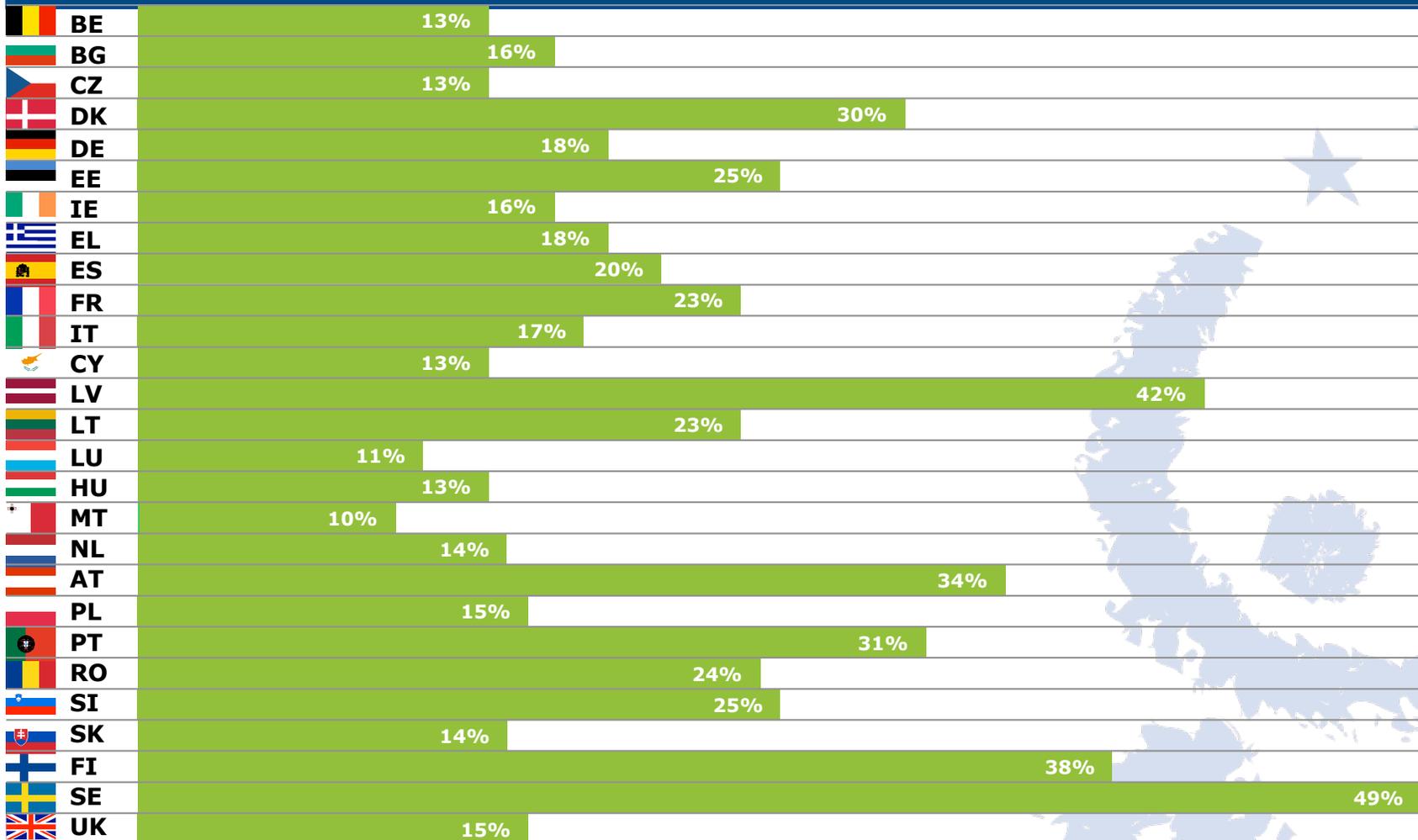
Efort Sharing Decision: MS targets for 2020



Percentage changes compared to 2005 emissions in the NTS sector

- Sets mandatory targets per MS for renewable energy shares in 2020
 - 2009: 8,5% of EU's energy consumption renewable
 - 2020: 20%
- Reduction of administrative barriers, regulatory stability, and improved access to the electricity grid
- Creates a sustainability regime for biofuels

Renewable Energy Directive: MS targets



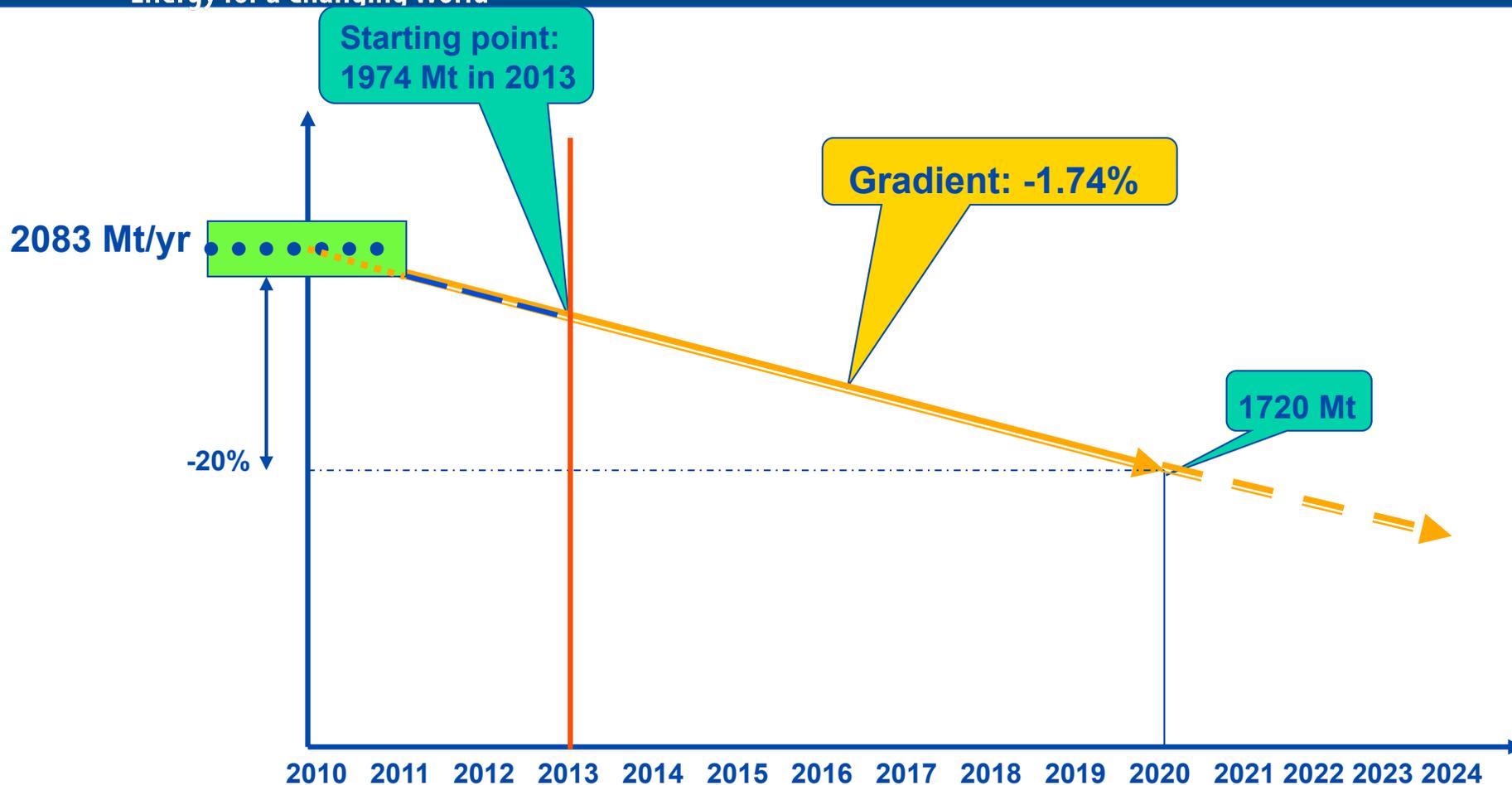
RES share in 2020

- Emitting CO₂ has a price (becomes a cost): incentive to use cleaner technology
- Some 10,000 installations in power and industry face quantitative limits to CO₂ emissions (allowances)
- Covers ±45% of EU emissions
- Overall cap:
 - 2005: 2.3 bn tonnes
 - 2008: 2.08 bn tonnes
 - 2020: 1.72 bn tonnes

➡ - 21% compared to 2005



EU ETS: a predictable EU-wide cap beyond 2020 (gradual steps)



- Linear factor to be reviewed by 2025
- Aviation to be included; will change figures correspondingly, but cap not reduced
- Disclaimer: all figures are provisional and do not account for new sectors in third period



EU ETS: price development



Source: Point Carbon

- Fully harmonised allocation rules
- Auctioning is default allocation method – for power sector
- Free allocation (partial or full) on basis of ex-ante benchmark (10% best) for energy-intensive manufacturing sectors



- Certainty and predictability: credits to be used up to 2020
- **Quantity** restriction (supplementarity: 50% of reduction effort):
 - minimum 11% of NAP2 allocation
 - resulting in 1.6 to 1.7 Bt over 2008-20
- **Quality**: comitology (harmonised approach) to ensure that credits represent real emission reductions
 - no nuclear and forestry allowed

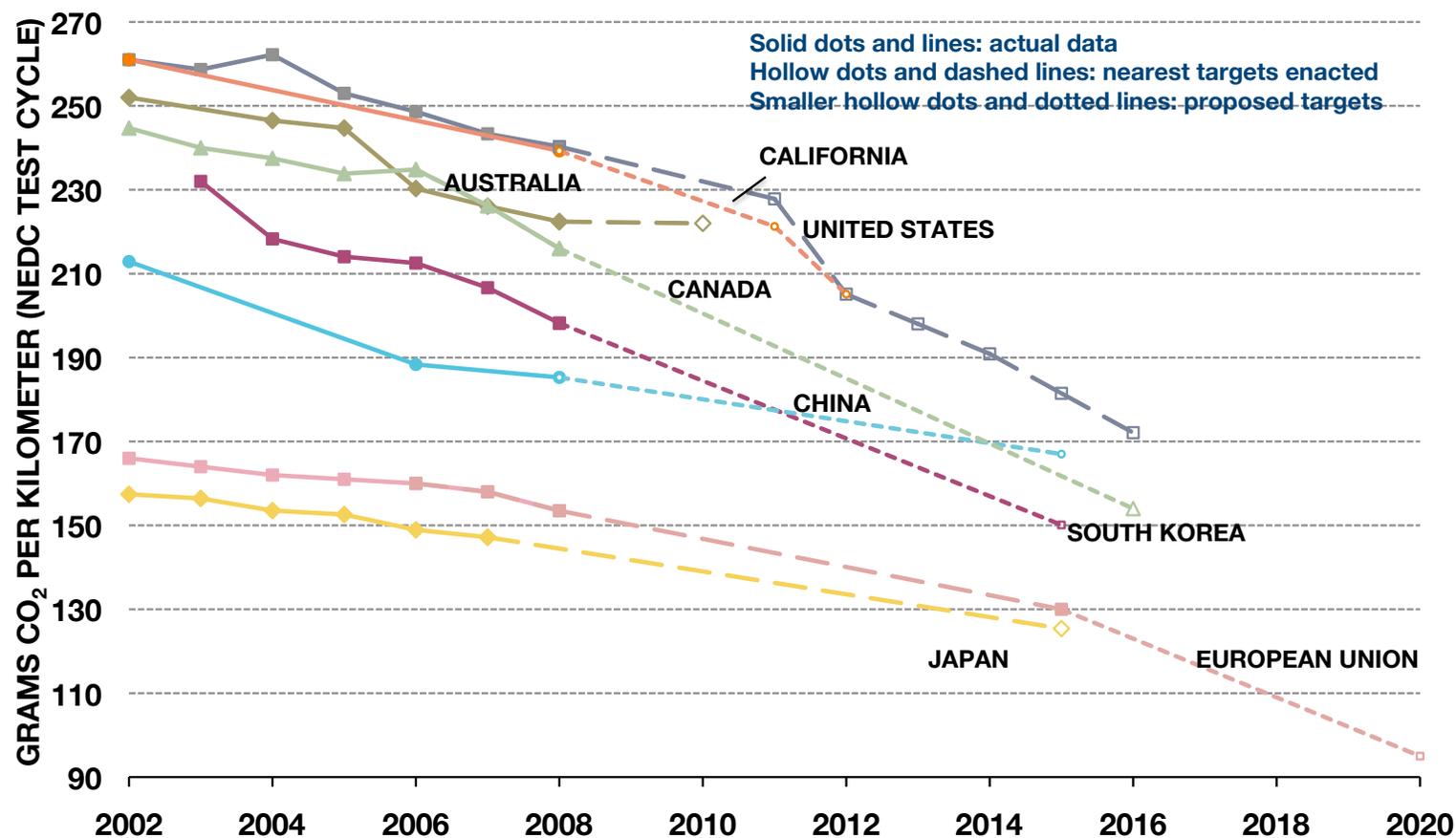
- Cap:
 - 2012: 97% of 2004-06 emissions
 - From 2013 onwards: 95%
- Auctioning: 15% as from 2012
- Scope: internal, outbound and inbound aviation
- A third country can take equivalent measures

- Carbon price is main incentive for CCS/RES
- In addition, up to 300 million allowances available until end 2015 for CCS and innovative renewable energy technology demonstration projects (\pm 4/5 bn €)
- Projects selected on the basis of objective and transparent criteria, ensuring geographical balance
- Operators receive support only after demonstrated performance

- Implementing measures set efficiency standards for wide range of products:
 - Phase out of incandescent light bulbs
 - Electric motors (including industrial)
 - Standby in appliances
 - TV, fridge, ...
 - Next will be (household) boilers
- Example of impacts: light bulbs estimated to save 15 mio ton CO₂ in 2020

- Reduction of CO₂ from new passenger cars (fleet-wide average):
 - 2015: 130 g/km (48mpg)
 - 2020: 95 g/km (65mpg)
 - 2009: 146g/km (1995: 186g/km)
- Taxation of motor fuels: a major driver towards energy-efficient cars (\pm 50% of price at pump)
- Importance of scrappage schemes and CO₂ modulation of registration taxes
- Being extended to light duty vehicles (VANs)

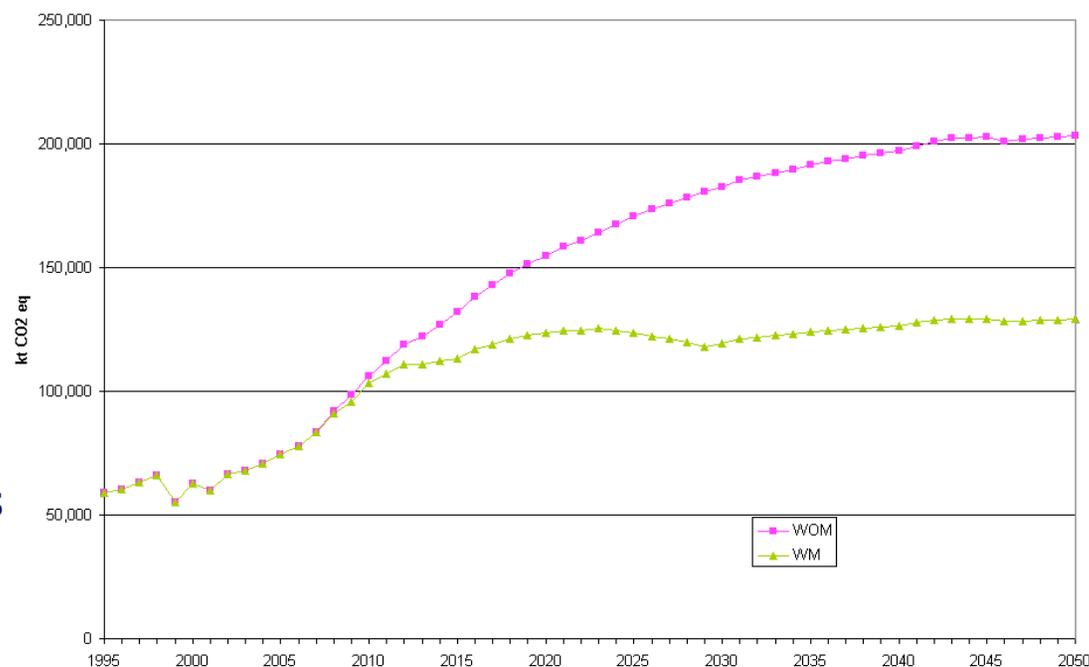
PASSENGER VEHICLE GHG EMISSIONS FLEET AVERAGE PERFORMANCE AND STANDARDS BY REGION





- 6% reduction by 2020 of life cycle green house gas emissions per unit of energy from fuel and energy
- saves up to 60 million tonnes CO_{2eq} by 2020
- How?
 - substitution of fossil fuels by other fuels such as sustainable biofuels
 - LPG and CNG
 - electric cars
 - reducing upstream emissions in and outside of the EU

- F-Gas Regulation & MAC Directive adopted in 2006
 - Promoting both containment and innovative low GWP substitutes
 - Driving global innovation
- Draft estimates indicate
 - Expected to deliver GHG reductions (vs. BAU) of 30 Mt CO₂-eq pa by 2020 and 70 Mt CO₂-eq pa by 2050
 - EU F-Gas emissions still growing but at much lower rates
- Regulation subject to review in 2011

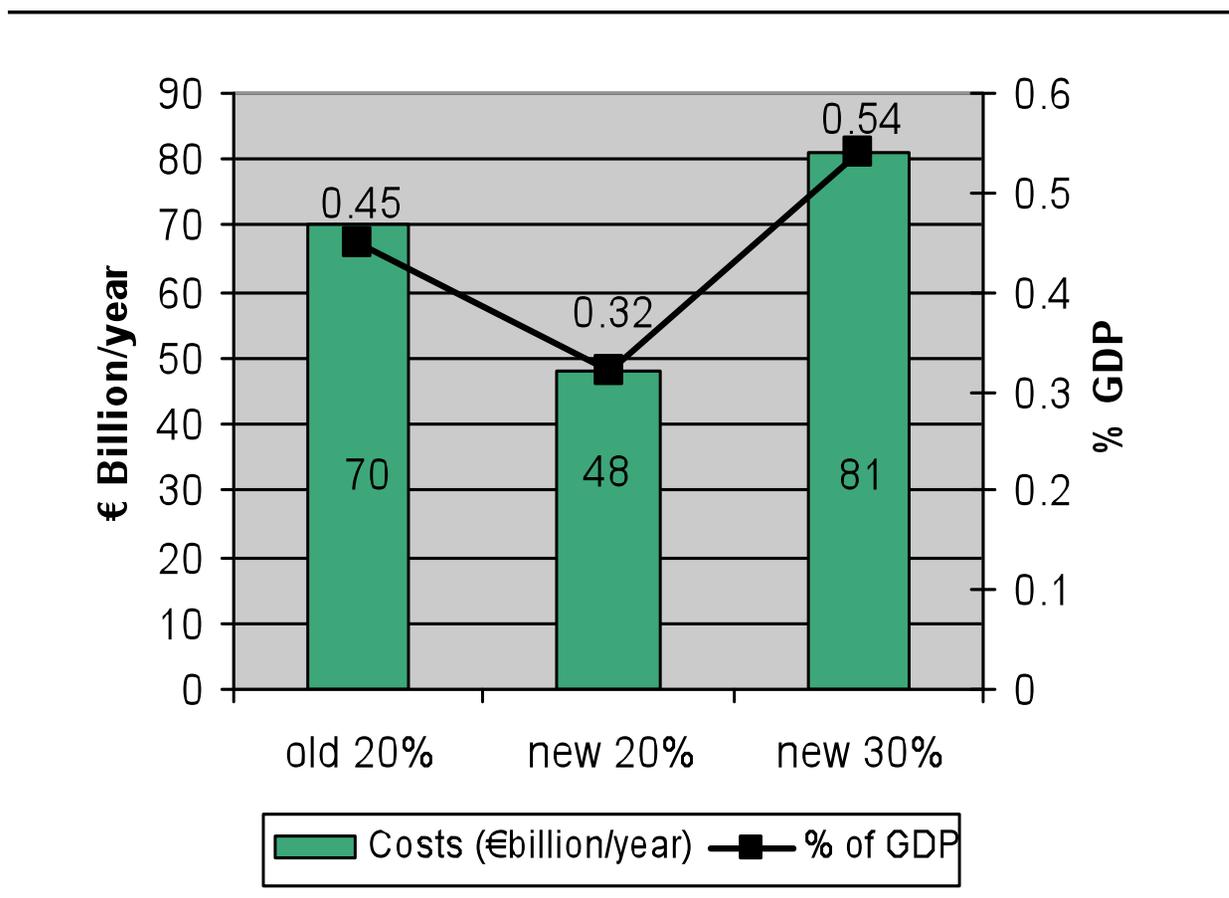


Expected EU F-Gas emissions with current measures compared to the counter-factual scenario (draft estimates)



- Other developed countries commit to comparable reductions in line with IPCC range of -25% to -40%
- Developing countries contribute adequately according to their responsibilities and respective capabilities (on average between -15% to -30% compared to baseline)
- An agreement that is international, comprehensive and ensures environmental integrity
- EU is ready to act, but at present, conditions are not met

Cost of -20%/30% revisited





- Costs of -20% lower due to:
 - economic recession
 - higher energy prices
 - higher energy efficiency

(new baseline for 2020 includes ETS, CO₂ from cars, eco-design measures)
- Carbon price lower, weaker incentive for innovation:
 - now: 13-15 €
 - 2020: less than 20 € (unused allowances)
- Costs of -30% remain substantial:
 - ETS: target from -21% to -34%
 - Effort Sharing: target from -10% to -16%

A second Kyoto commitment period ?

- The EU preference remains a single legally binding agreement
- The EU is open to a second KP commitment period on condition of environmental integrity:
 1. Commitments by developed countries that are not a party to the Kyoto Protocol and actions by major emerging economies in the context of an international legally binding treaty;
 2. Addressing weaknesses in the Kyoto Protocol: accounting for developed country forestry (LULUCF) and the banking of surplus emission budgets (AAUs)
- Use of CDM credits in the European carbon market up to 2020 independent from 2nd commitment period

- Reduced risks for carbon leakage:
 - Carbon price lower, but affordability reduced
 - Partial free allocation for energy-intensive industries
 - Pledges of Copenhagen Accord welcome, but delivery uncertain
- In a 30% scenario:
 - the more trading partners act, the lower the risk for carbon leakage
 - maintain current and consider, if need be, further measures



- 20% independent target by 2020:
key policy instruments in place (legislation adopted)
- prepares necessary transition to low carbon economy in the longer term (emission reductions after 2020)
- going further is conditional

**YOU CONTROL
CLIMATE CHANGE.**



TURN DOWN. SWITCH OFF. RECYCLE. WALK. CHANGE