



Towards a low emission and climate resilient economy in Europe

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*Climate
Action*



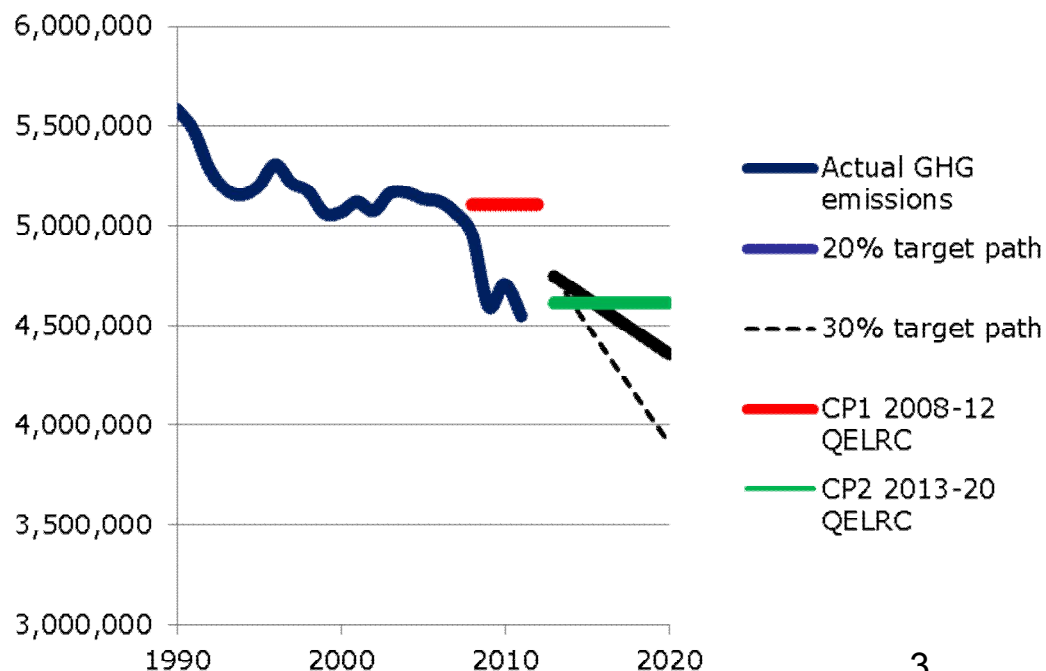
Outline

- **Towards 2020: State of play and current implementation challenges of the EU Climate and Energy Package**
 - **EU ETS**
 - **Renewables**
 - **Energy efficiency**
 - **Adaptation**
- **Beyond 2020: Developing the 2030 Framework**
- **Conclusions**



Towards 2020 (1): EU greenhouse gas emissions until 2020

Actual emissions and legislated target paths of EU-27, in thousand tCO₂-eq.

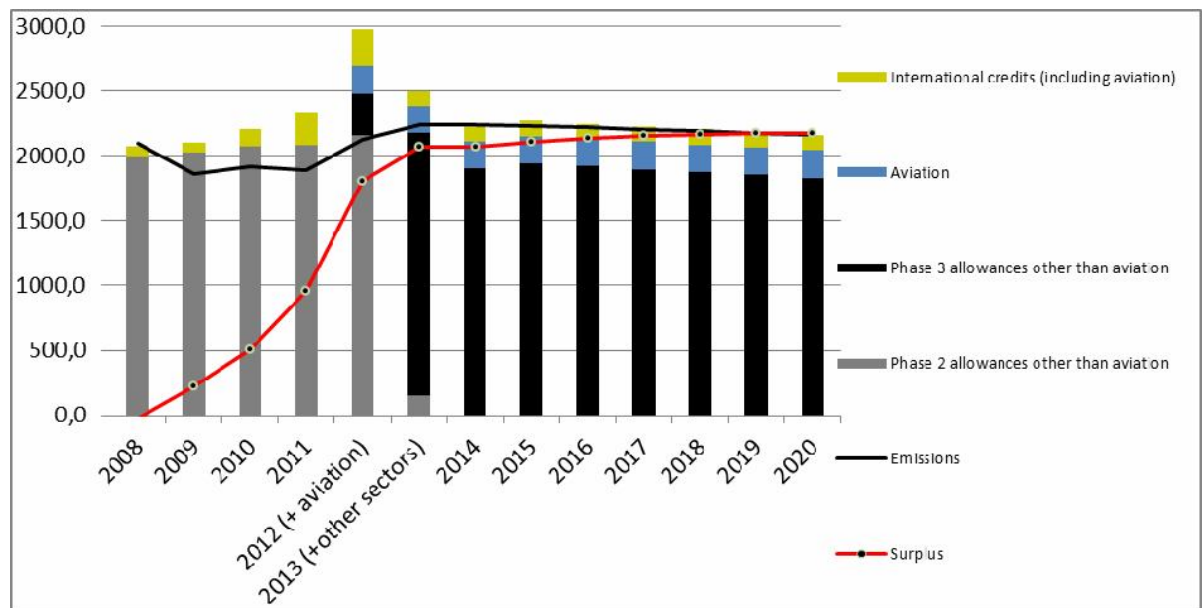


- Between 1990 and 2011, EU-27 GDP grew by 48% while emissions decreased by 18.5%
- Despite a slight increase of GHG emissions in 2010 compared to 2009, emissions in 2011 follow the decreasing trend since 2004

Towards 2020 (3): EU Emissions Trading System - Phase 3

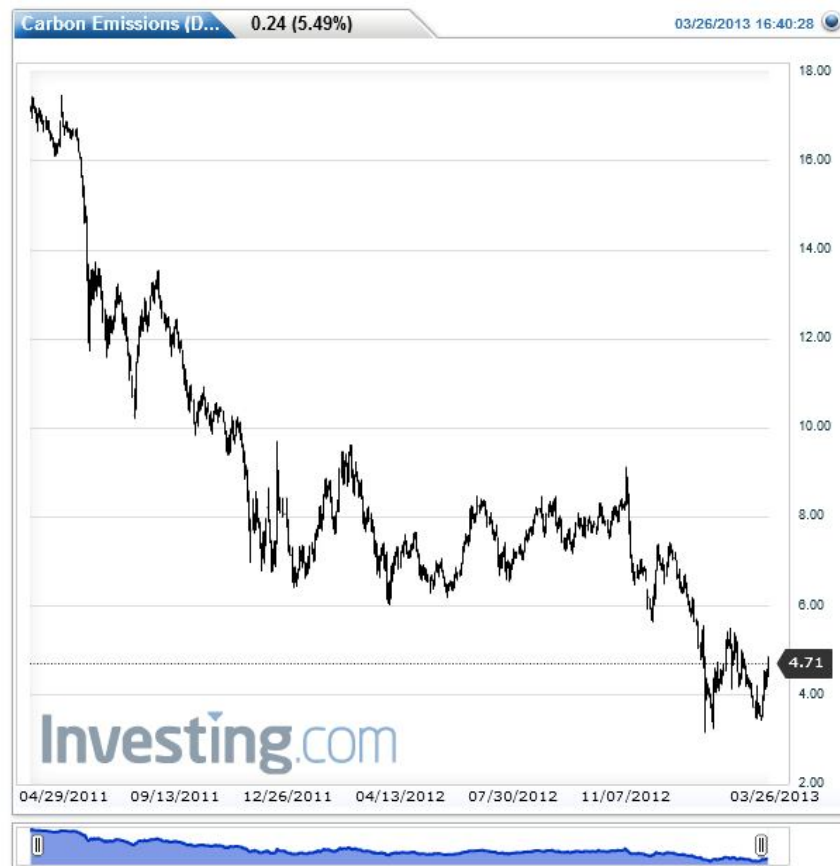
But triggered by recession challenge of a surplus

- In 2012 and 2013 rapid build-up of surplus, largely due to regulatory provisions in the transition of phase 2 to phase 3.
- Surplus continues to grow, and estimated to reach for most of Phase 3 up to 2020 a size of around 2 billion allowances.
- Low carbon prices, reduced role in incentivising emission reductions



Towards 2020 (4): EU ETS - risk of policy fragmentation

- *Current status of EU ETS has led several Member States to take additional action, e.g.*
 - UK carbon price floor
 - Dutch coal tax
- *If ETS surplus continues, fragmentation risk increases*
 - E.g. current discussion on capacity mechanisms
- *Danger for completion of internal energy market*





Towards 2020 (5): Renewables policy

Achievements

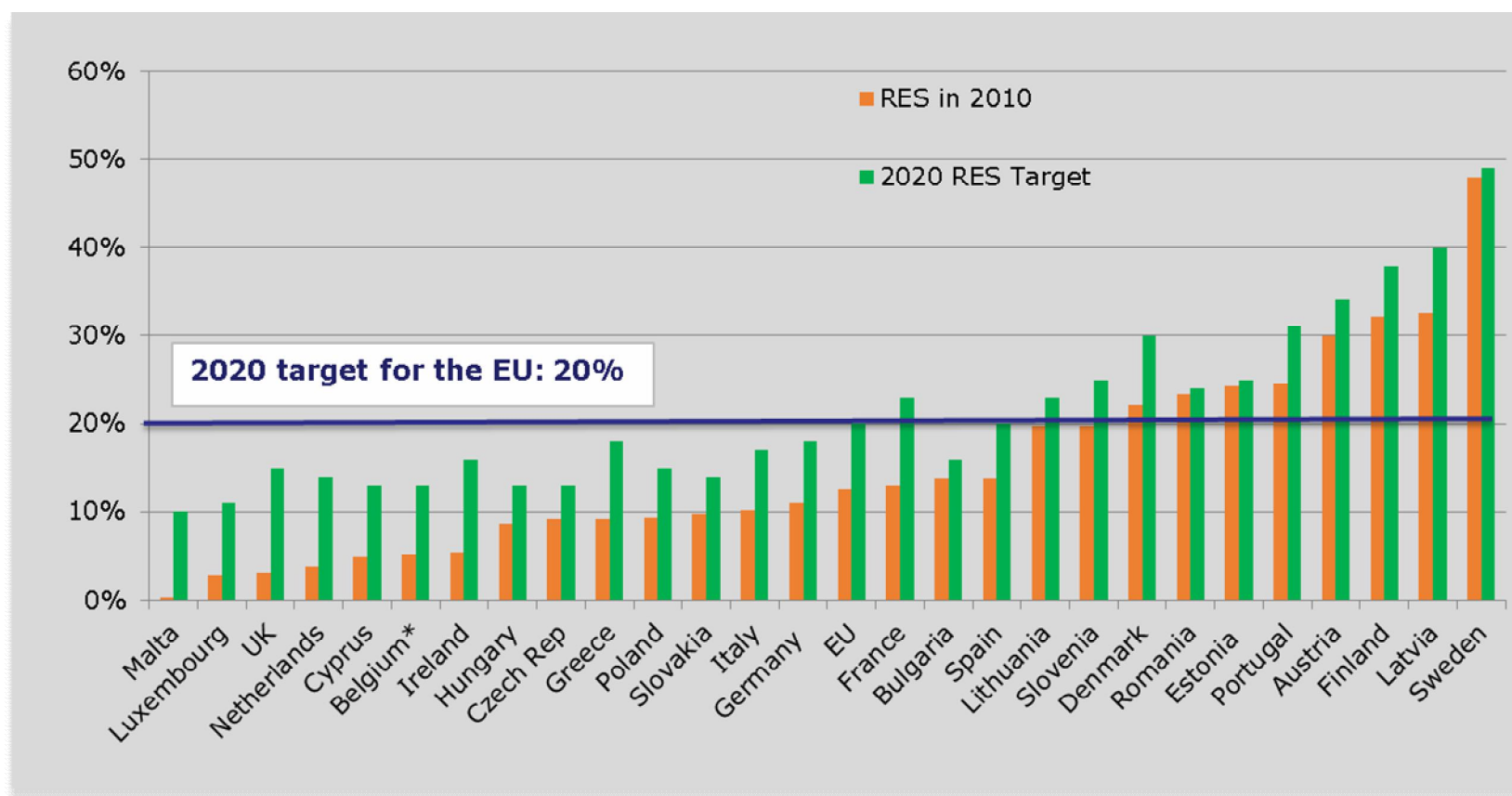
- *Accelerated deployment – strong impact on investment patterns*
- *Considerable emission reductions achieved*
- *Economies of scale drive down costs of key technologies (PV, wind)*

Current challenges

- *increasing expenditures (feed-in tariffs) in times of fiscal consolidation*
- *major alterations to national support schemes*
- *successful industrial policy?*
- *national systems vs. internal market?*
- *market integration – grid integration*
- *sustainability of the use of biofuels and biomass?*



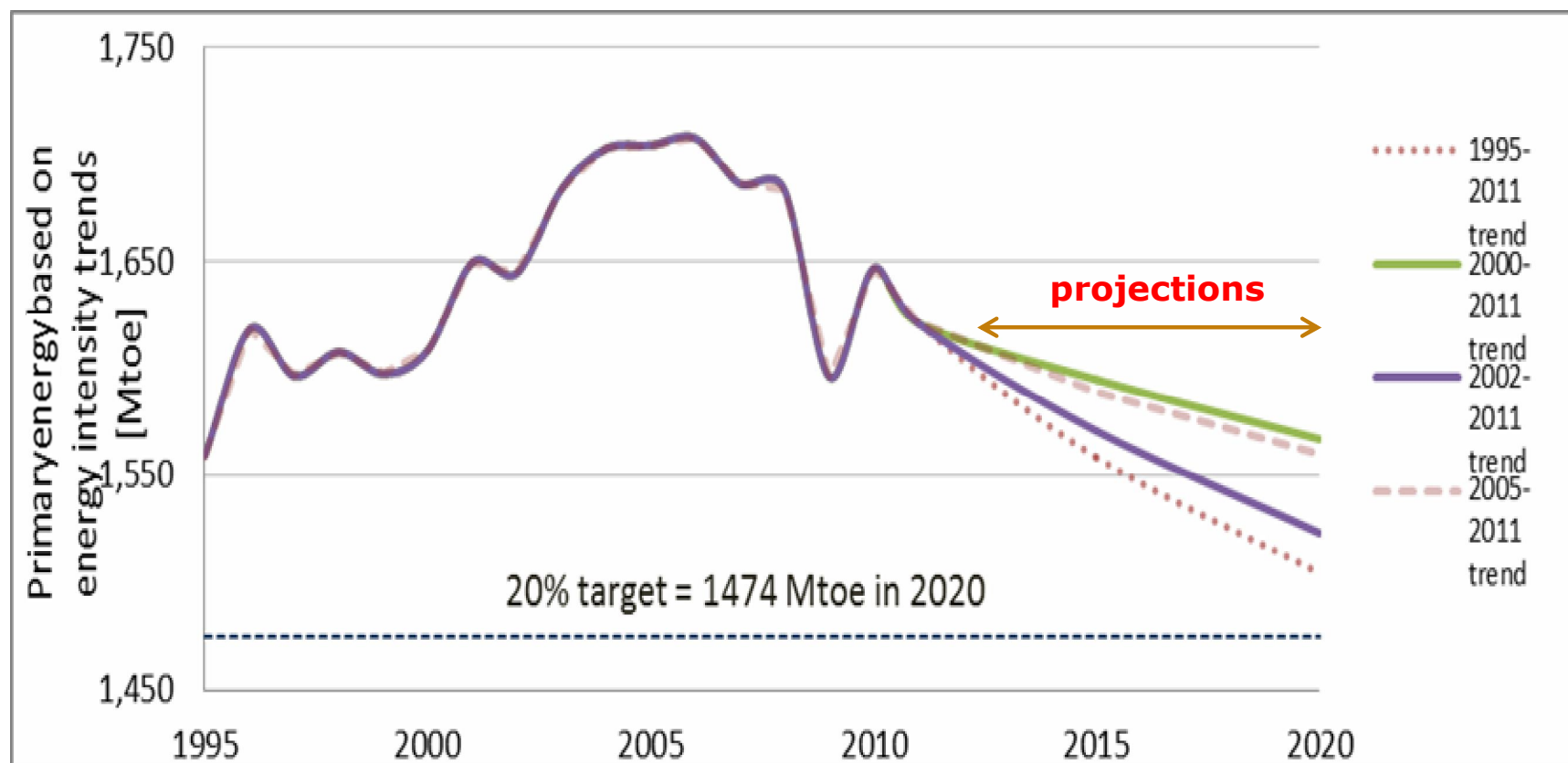
Towards 2020 (6): Share of renewables



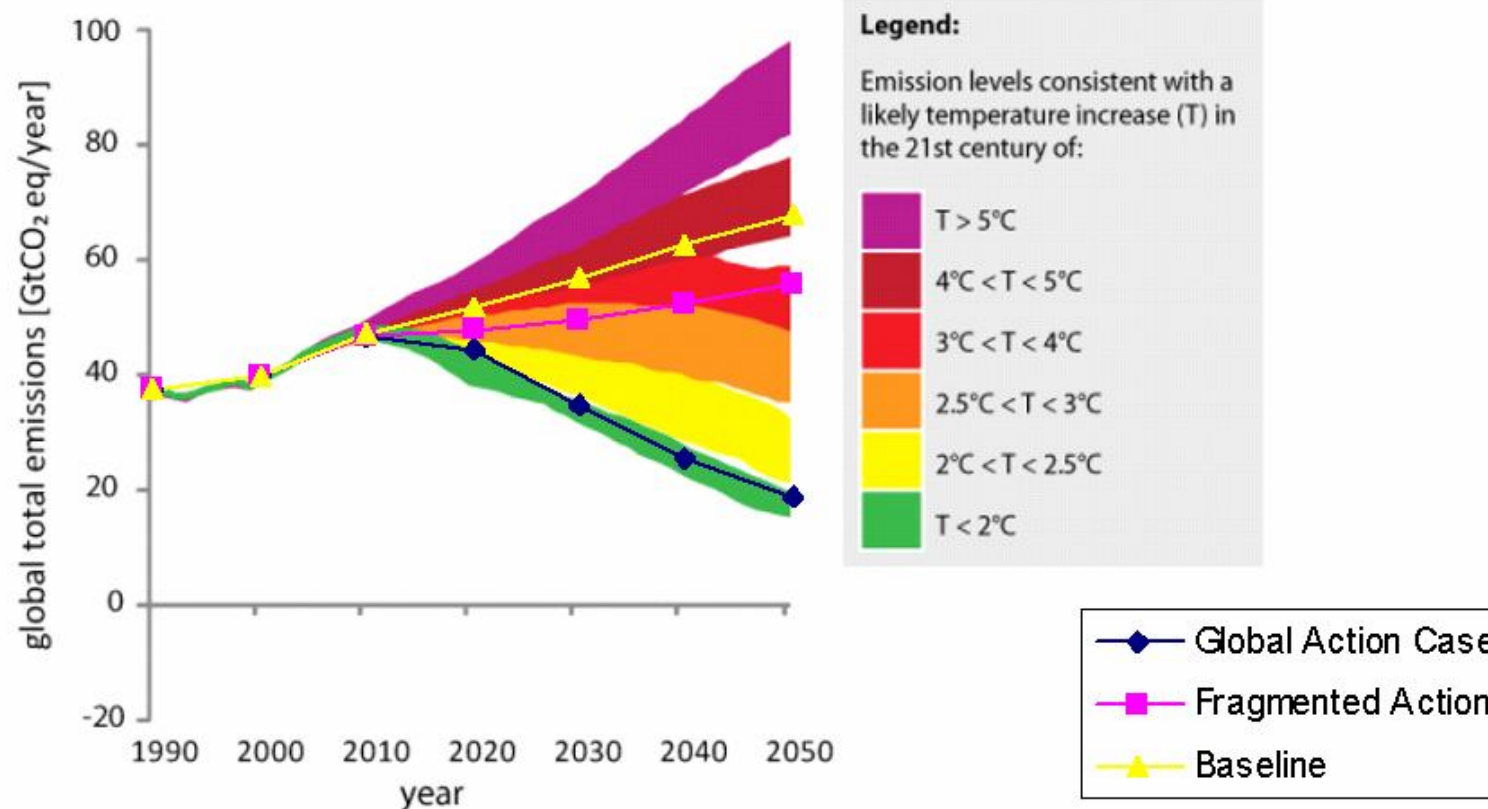
Source: Eurostat

Renewable sources accounted for 12.7% of the EU's energy consumption in 2010

Towards 2020 (7): EU energy efficiency target likely to be missed with current policies



Towards 2020 (8): Adaptation to the adverse effects of climate change



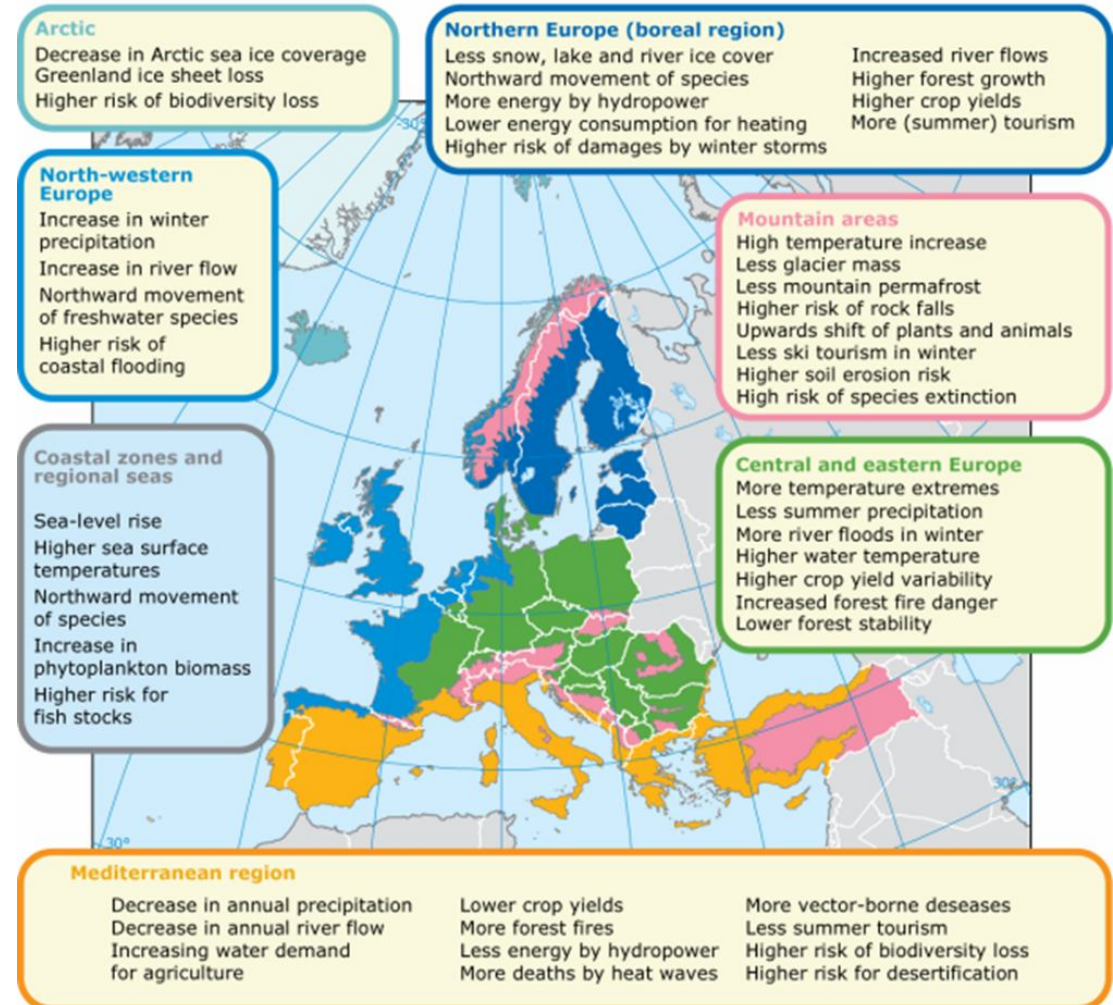
Towards 2020 (9): Vulnerable Europe

The EU is already facing
**unavoidable impacts of
climate change**

Impacts will affect the entire
EU territory, with regional
differences

Sea level rise, increasing
temperatures and changes in
precipitation and flood
patterns have impact on
coastal areas

Effective adaptation action
can **reduce** overall damage
costs, save lives and
natural and **human assets**.





Towards 2020 (10): Adaptation

Cost efficient mitigation and adaptation are both essential and complementary.

- **Need to increase mitigation efforts:** If the 2°C target is missed, adaptation increasingly costly.
- **Need to manage risks of adverse effects of climate change:**
 - Adaptation is inevitable (delayed impact of emissions) and is cheaper: *1€ invested in flood protection saves 6 € damage costs.*
 - Postponed adaptation and maladaptation will lead to higher damage costs: *≥ 100 bn/year by 2020; 250 bn/year by 2050 for the EU*



Towards 2020 (11): The three priorities of the EU's Adaptation Strategy

1. Promoting action by Member States

- i. Supporting all Member States to adopt an adaptation strategy by 2017
- ii. EU funding for adaptation in priority areas, e.g. cities

2. Better informed decision making

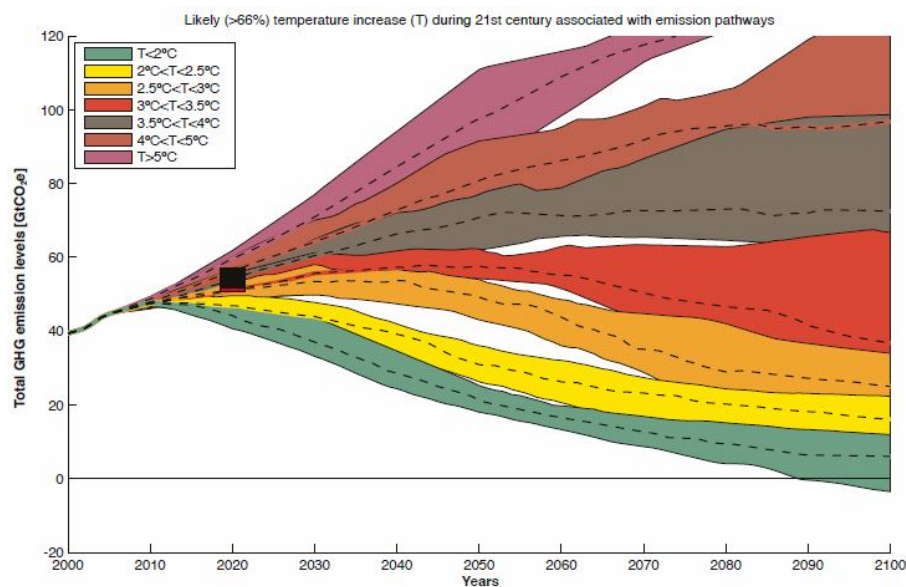
- i. Closing knowledge gaps;
- ii. Facilitating knowledge dissemination via Climate-ADAPT

3. Promoting adaptation in key vulnerable sectors

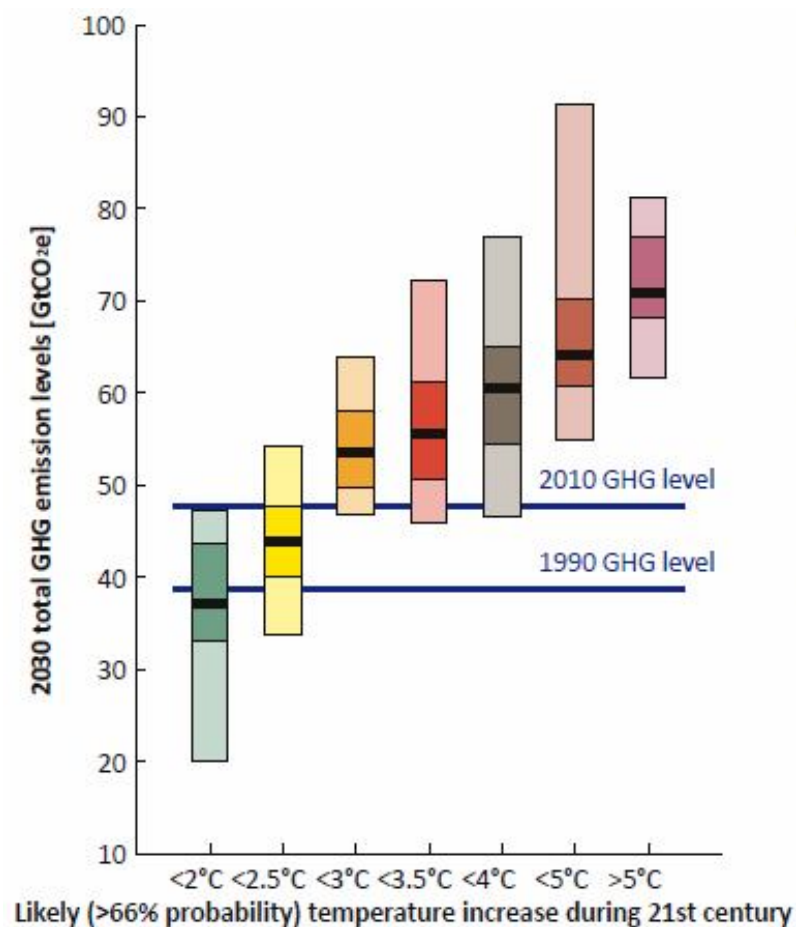
- i. Climate proofing EU common policies and the use of EU funds;
- ii. Key role for insurance and other financial products



Beyond 2020 (1): Mitigation challenge in 2030

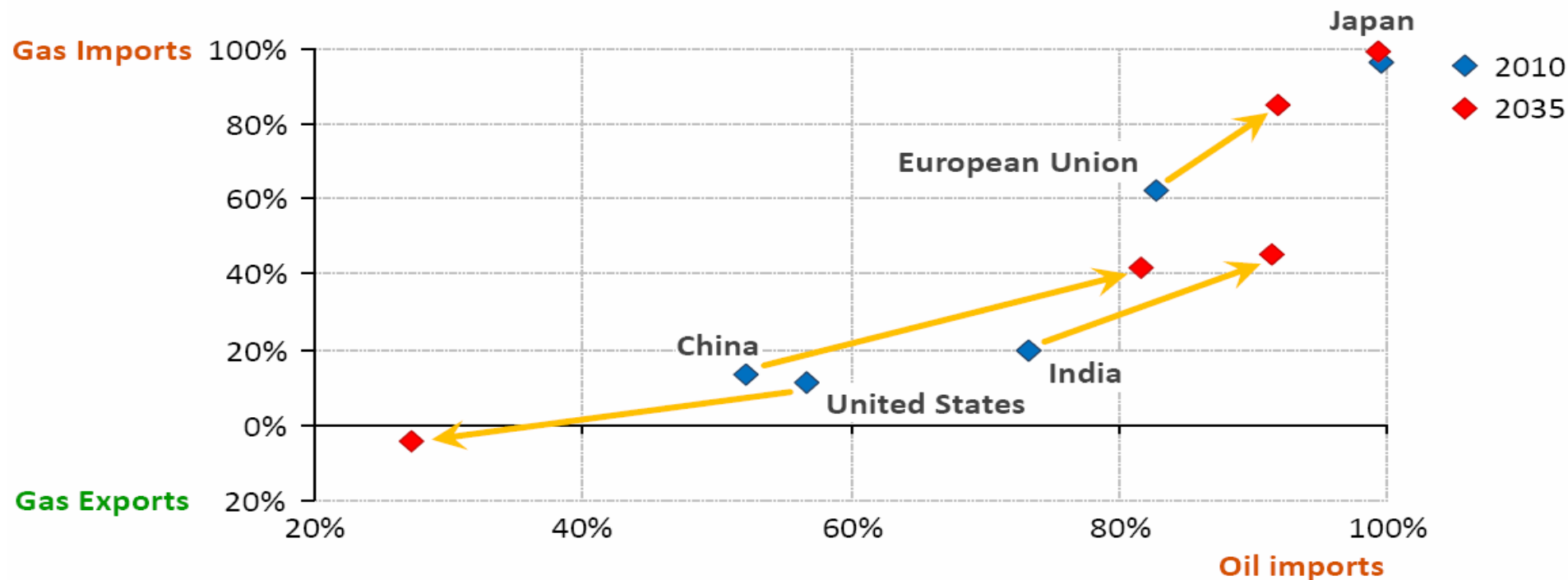


Source: UNEP (2012)



Beyond 2020 (2): Energy security challenge in 2035

Net oil & gas import dependency in selected countries

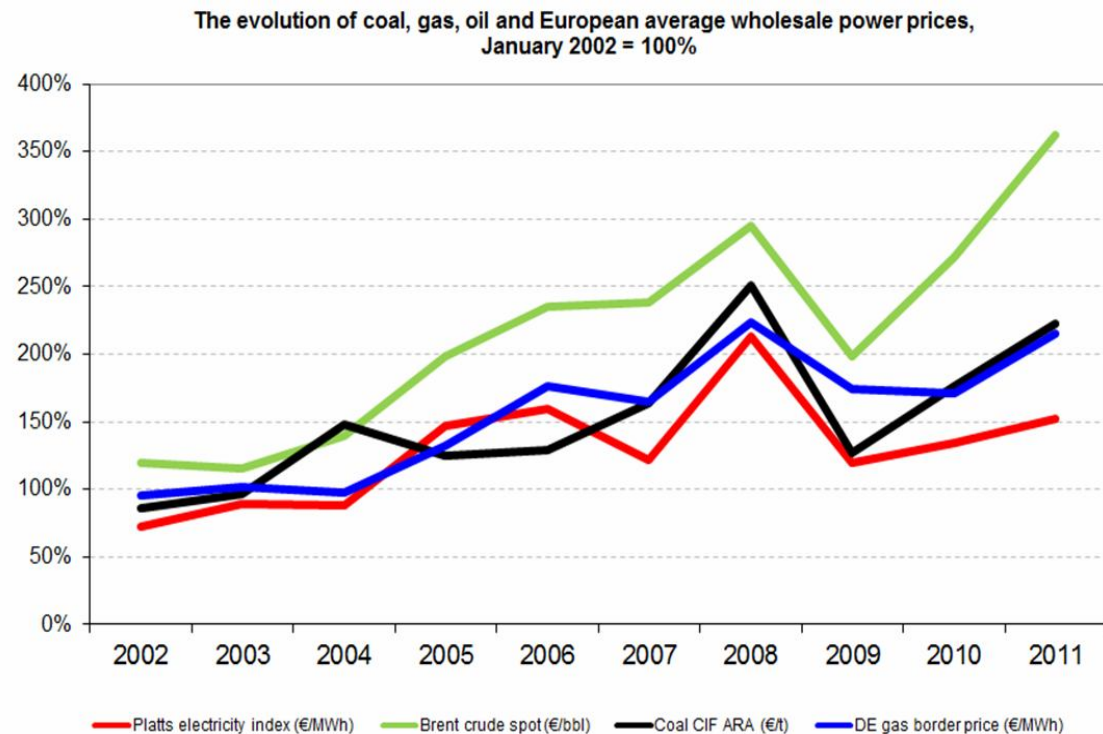


*While dependence on imported oil & gas rises in many countries,
the United States swims against the tide*

Source : IEA 2012

Beyond 2020 (3): Energy price challenge

- *Europe is exposed to international energy prices*
- *Recently diverging gas prices with US*
- *EU energy prices projected to increase with or without further decarbonisation policies*



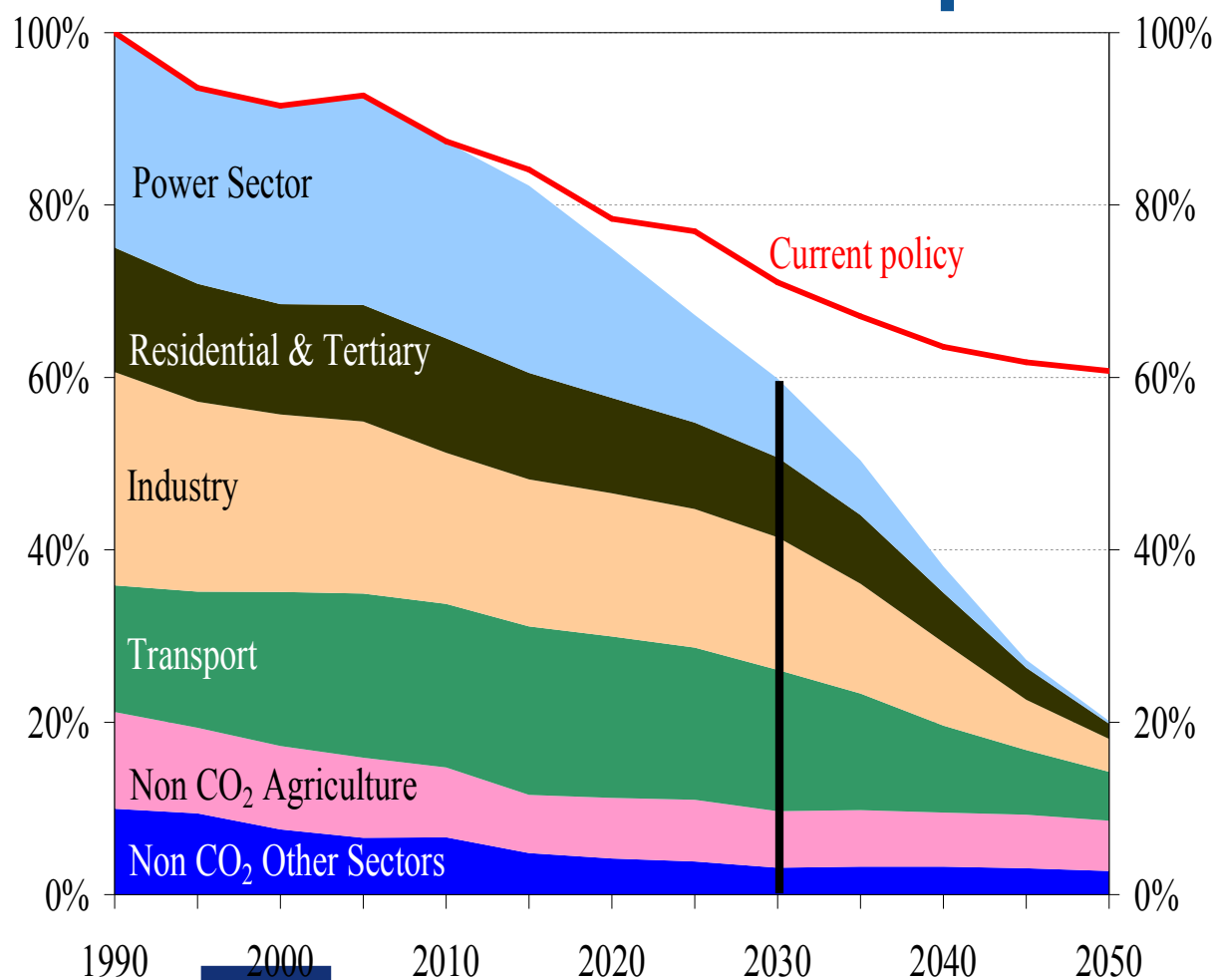
Beyond 2020 (4): The 2050 Low-Carbon Roadmap

80% domestic reduction in 2050 is feasible

- with currently available technologies,
- with behavioural change only induced through prices
- if all economic sectors contribute to a varying degree & pace.

Efficient pathway and milestones:

- 25% in 2020
- 40% in 2030
- 60% in 2040

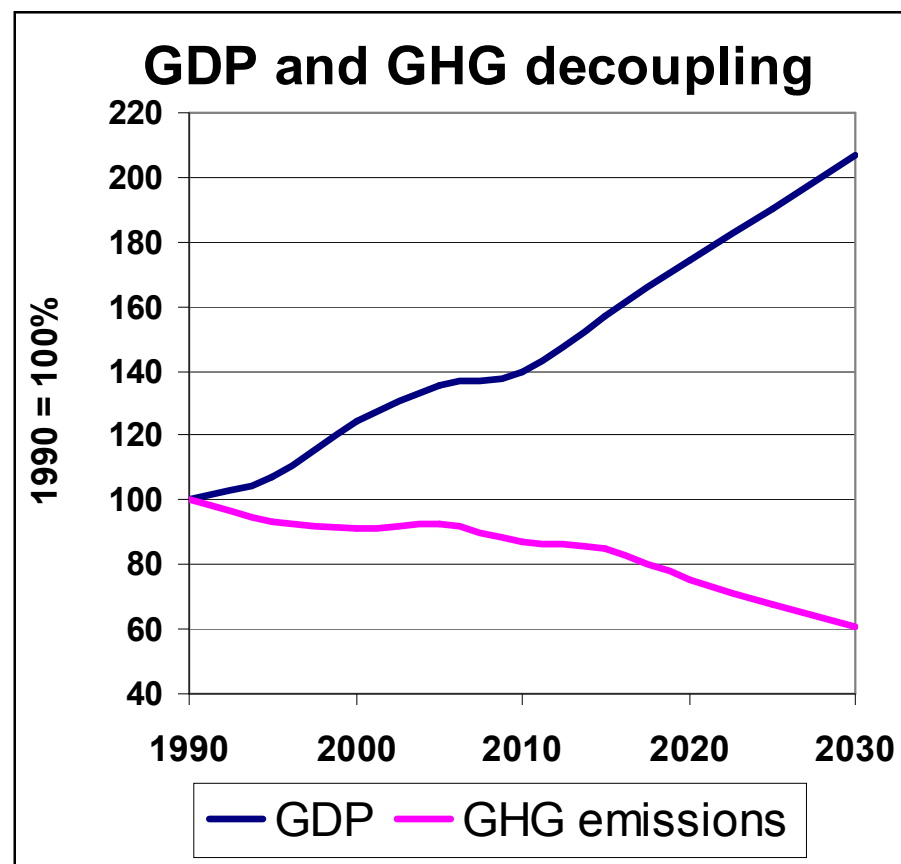




Beyond 2020 (5): Investing in innovation ...

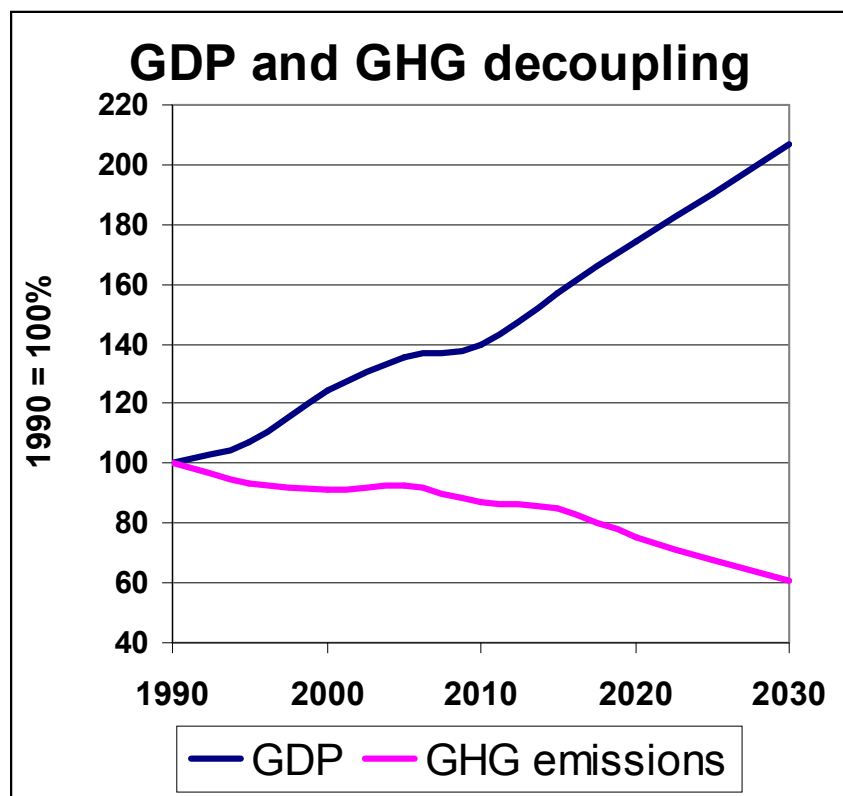
Additional domestic investment: € 270 billion annually during 2010-2050, equivalent to 1.5% of GDP (Total investment – 19% of GDP in 2009), of which

- built environment (buildings and appliances): € 75 billion
- transport (vehicles and infrastructure): € 150 billion
- power (electricity generation, grid): € 30 billion



Beyond 2020 (6):

... means reducing the energy bill, raising air quality & health and creating jobs



- **Fuel savings: € 175 to 320 billion on average annually during 2010-2050**
- **Primary energy consumption about 30% below 2005 without negatively affecting energy services**
- **Making EU economy more energy secure:**
 - Halves imports of oil and gas compared to today
 - Saving € 400 billion of EU oil and gas import bill in 2050, equivalent to > 3% of today's GDP
- **Air quality and health benefits: € 27 billion in 2030 and € 88 billion in 2050**



Beyond 2020 (7): Key issues in designing the 2030 Framework for climate and energy

- *How best to maximise synergies and deal with trade-offs between the objectives of competitiveness, security of energy supply and sustainability?*
- *Which targets?*
- *Which (coherent set of) instruments?*
- *How to foster competitiveness?*
- *How best to acknowledge different MS capacities?*

⇒ **Green Paper, stakeholder feedback**



Conclusions

- *Towards 2020:*
 - EU broadly on track to meet its targets, but some Member States will face difficulties.
 - However, parts of the package face serious challenges particularly due to the economic and financial crisis.
- *Beyond 2020:*
 - 2030 Policy Framework will have to integrate lessons learnt.
 - Work has started and stakeholders consulted on main policy issues.

Thank you !

a world you like
with a climate you like



<http://world-you-like.europa.eu/en/>



Towards 2020 (6): EU ETS - successfully addresses competitiveness and carbon leakage risk

- *Economic advantages of a cost-efficient instrument*
- *Provisions to protect sectors with significant carbon costs exposed to international competition*
 - Free allocation based on benchmarks
 - State aid rules allow Member States from 2013, to provide compensation for part of the indirect ETS costs for the most electricity-intensive sectors

