



European Climate Policy

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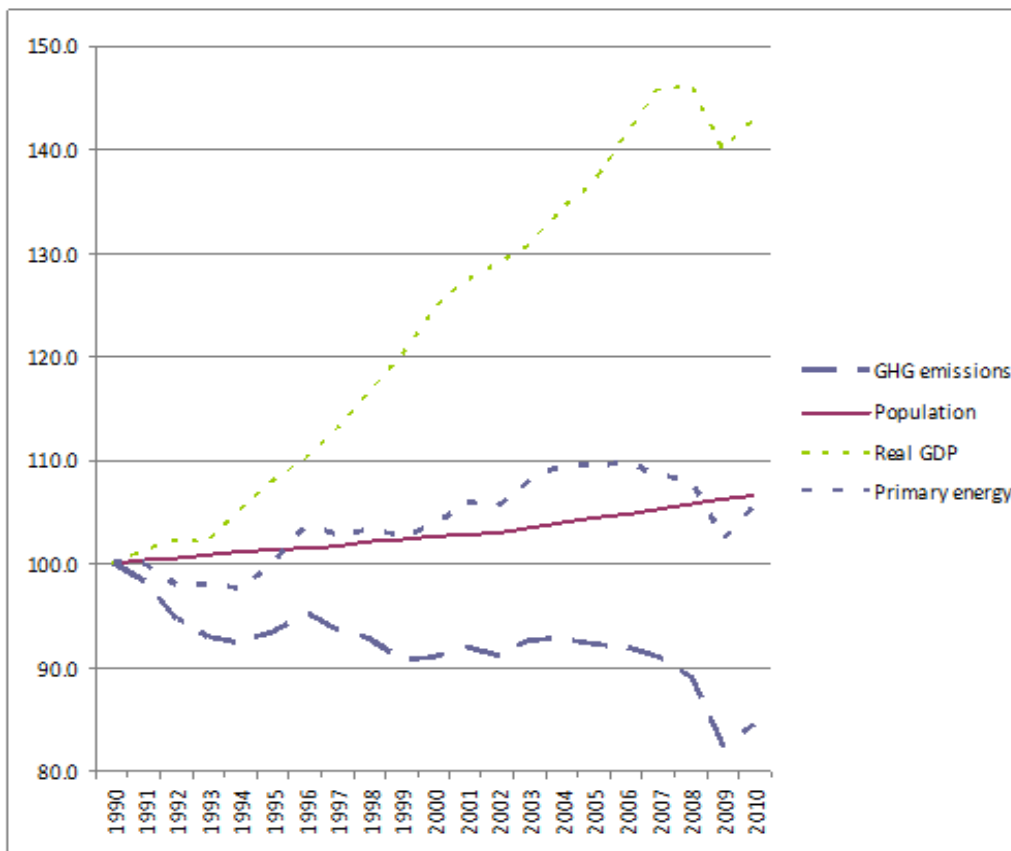
Outline

- ***Climate policy challenges***
- ***Where is the EU and Poland now? Where is the rest of the world?***
- ***EU 2050 Low-carbon economy Roadmap***
- ***Opportunities and challenges for Poland***
- ***Next Steps at EU level***
 - ***Creating clarity for 2030***
 - ***Climate mainstreaming in future EU budget***
- ***Conclusions***

Where are we now ?

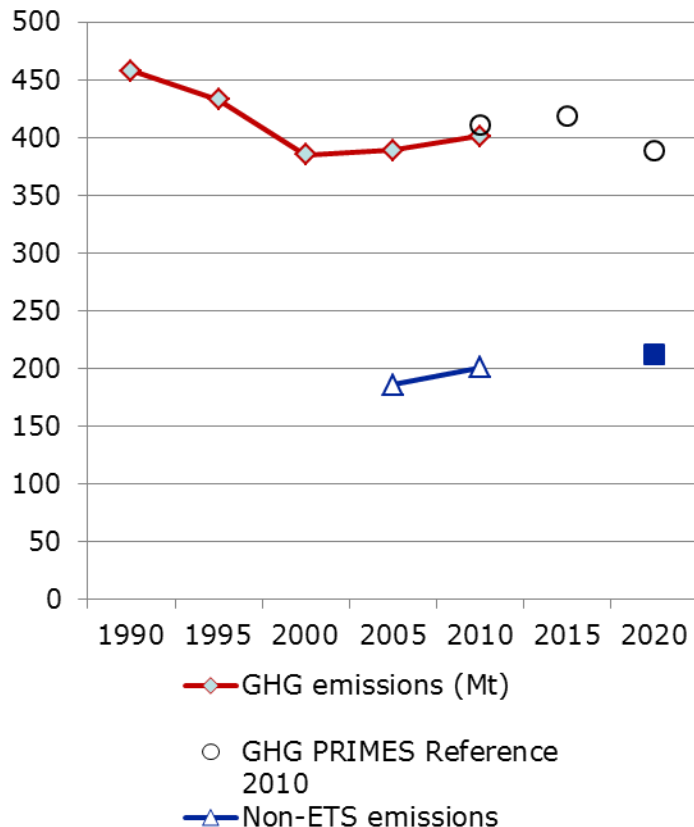
Climate Action until 2020

Where does the EU stand now?



- **2010 greenhouse gas emissions 15.5% below 1990 levels**
- **EU GDP grew by more than 40% during the same time**
- **EU on track towards 20% emission reduction by 2020**

Where does Poland stand now?



- **Robust GDP growth**
- **Solid fuels (2010)**
87% of electricity,
54% of primary energy
- **GHG emissions have reduced since 1990 with GDP more than doubling**
- **Non-ETS target: +14% in 2020 compared to 2005**
- **Renewables target 15% in 2020 (2010: 9,4%)**
- **Energy intensity reduced considerably, but still more than double of EU average**

Europe's 2020 strategy

“Smart, sustainable and inclusive growth”

energy security

- **EU increasingly dependent on imported fossil fuels**
- **Risks from high price of oil and gas**

innovation, jobs & growth

- **EU strong in manufacturing industries, ensure continued leadership while other regions are also investing in green growth**

Climate change impacts threaten future growth

- **More frequent and severe extreme weather - floods, storms, heatwaves, droughts – impacts many sectors**

Where is the rest of the world?

- **Share of 'developing countries' in total CO₂ emissions >50% (2011)**
- **Concrete emission pledges made by countries responsible for > 80% of global GHG emissions**
- **Copenhagen pledges: take halfway to 2020 emissions levels securing chances to stay below 2°C
– 6 to 11 GtCO₂e mitigation gap by 2020 to close**
- **Durban roadmap to global agreement in 2015**

International Developments

Growing global action, but fragmented and diverse:

- **South Korea:** green growth, ETS
- **China:** 5 year plan, pilot ETS, industrial clean tech policy
- **Australia:** link with EU ETS
- **USA:** performance standard power plants, CO2&cars, state RES portfolio standards, regional ETS
- **Mexico, South Africa, Brasil, India**

Developments in China

- **Emissions continue to grow, but China is changing the course of its GDP growth pattern**
- **40 to 45% improvement in CO2 intensity (2020 vs 2005)**
- **Global leader in wind / solar**
- **massive investments in clean tech (automotive, high speed rail, efficient products and processes)**
- **diversification of energy supply (gas, nuclear, RES)**

EU Roadmap to a competitive low carbon Economy 2050

2050 Low-carbon Roadmap

- Identifies cost-effective pathway, with intermediate milestones
- Identifies key technologies guiding R&D
- Identifies investments needs and benefits
- Identifies opportunities and trade-offs
- Gives direction to private sector and private households for long term investments.

Only global climate action reduces emissions in all parts of the world

EU objective: 80 to 95% reductions largely through domestic measures:

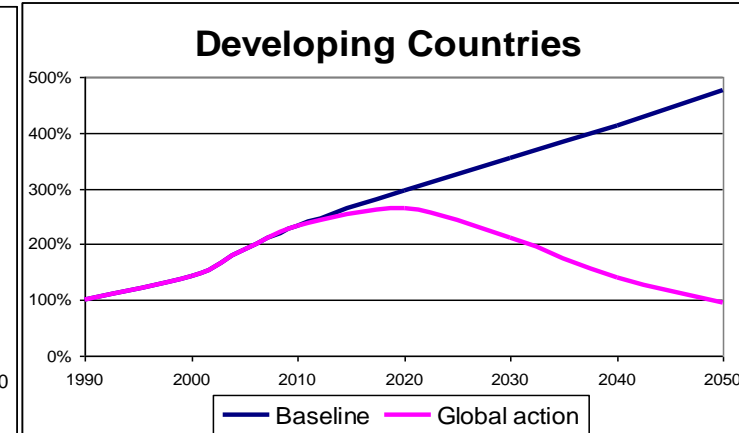
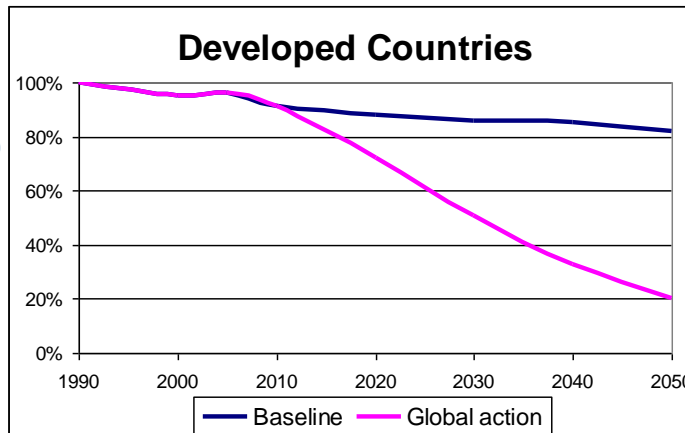
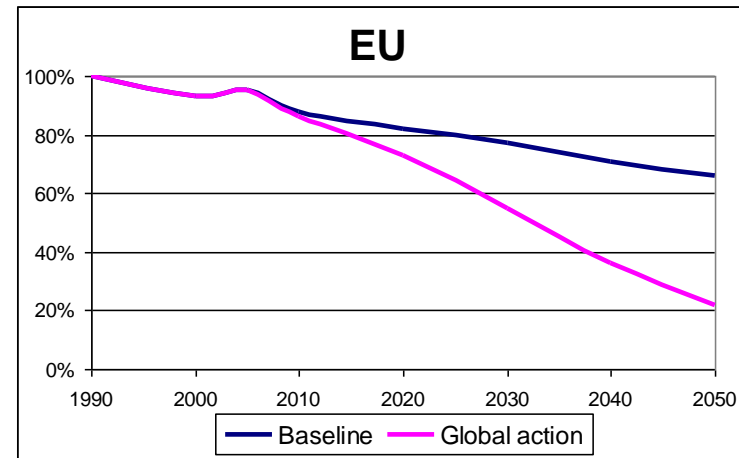
- around -80% internal reductions in 2050 compared to 1990

Developed Countries:

- similar efforts

Developing Countries:

- -5% compared to 1990
- Equivalent to -80% compared to business as usual
- no cheap offsets by 2050



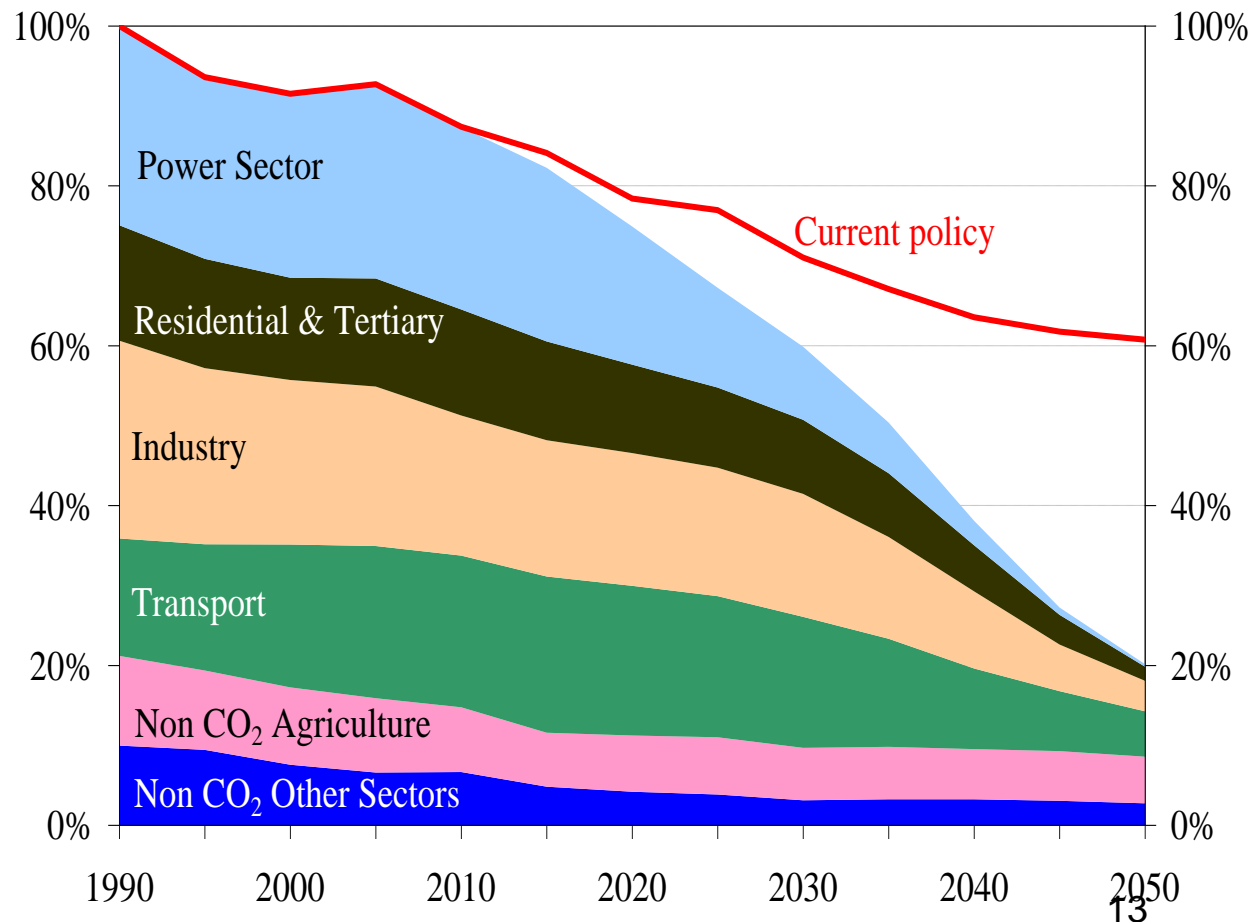
A cost-efficient pathway towards 2050

80% domestic reduction in 2050 is feasible:

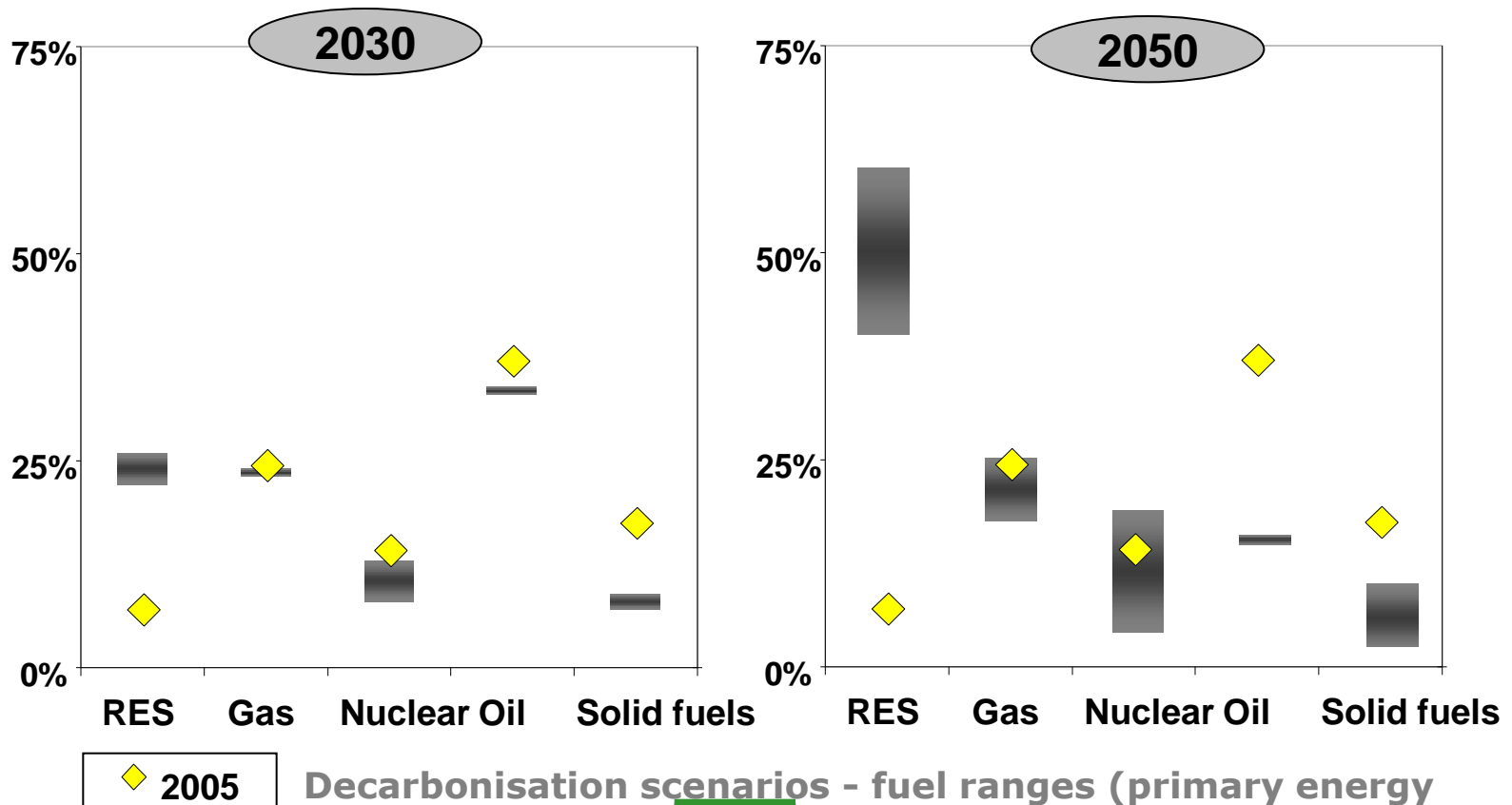
- With currently available technologies,
- With behavioural change only induced through prices
- If all economic sectors contribute to a varying degree & pace.

Efficient pathway and milestones:

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



All fuels can contribute in long-run



◆ 2005

Decarbonisation scenarios - fuel ranges (primary energy consumption in %)

More investments, less fuel spending

Additional domestic investment: € 270 billion annually during 2010-2050, equivalent to 1.5% of GDP, of which

- Built environment: b€ 75 b
- Transport : b€ 150
- Power (electricity generation, grid): b€ 30

Fuel savings of similar magnitude

Halves import of oil and gas

Air quality and health benefits b€ 27 e billion in 2030, 88 b€ in 2050

Roadmap 2050: Benefits for EU jobs

Sources of short term new jobs

- **Short term: e.g. in renovation of buildings, energy efficient services, renewables industry**

Auctioning or taxes give macro-economic benefits (revenues recycled for labour cost reduction, innovation)

Measures to protect energy-intensive industries

Long term job prospects depend on favourable economic framework conditions

- **e.g. expenditure on research & technology development, innovation, entrepreneurship, new skills, investment**

Challenges for the Polish economy

Transition costs are important but manageable

Transition costs higher than other MS

Significant investment needs

- **IEA: 2010-30 €195 bn for upgrade power sector**

How to address vulnerable energy consumers

More innovation, more competition

Opportunities for Poland

Modernising energy system and economic structures

- **Polish studies show huge investment needs in energy sector**

Opportunity for diversification, modernisation of energy supply

- **Also highlighted in Polish energy scenarios for 2050**
- **A more diverse energy mix, building on Polish domestic resources**
 - Biomass (incl. co-firing)
 - On shore wind
 - Shale gas
 - Efficient coal , + CCS
 - Nuclear?
 - network development

Opportunities for Poland

Significant cost-effective emission abatement potential

- **EU 2020 analysis confirms results of other studies on Poland: (already in 2020 -13% to baseline, similar to EU average)**
- **Various studies see very considerable potentials from 2030**
- **World Bank: cutting emissions by one third by 2030 at cost 10-15 €**
- **Continued role of coal: cost effective decarbonisation EU (-25% in 2020, -40% 2030) would for 2030 in Poland still project a 43% share of solid fuels in primary energy consumption**

Opportunities for Poland (ctd.)

Co-benefits are important

- fuel savings
- High air quality and health benefits
- EU cohesion policy could bring in 2020 up to € 2 bn of investment support into energy efficiency, renewables, waste man-t...
- World Bank: shift towards low emissions could start augmenting growth by 2030

Next steps

1) Proposed EU budget 2014-2020

- Mainstreaming the climate-related share of the EU budget will be raised significantly to **20% of the whole EU budget** (at least €200bn for climate-related expenditures)
- **Cohesion policy:** investment in efficiency and renewables
 - ERDF: Higher income and transition regions at least 20%
 - Lower income regions would allocate at least 6% (at least € 7.3 bn).
 - Cohesion Fund: € 68.7 bn for transport and environment
- **Connecting Europe Facility**, e.g. energy infrastructure
- **Horizon 2020:** around 35% of the Horizon 2020 budget should be climate-related R&D&I expenditure.
- **Greening of the CAP**

2) Towards a 2030 policy framework

Low carbon and energy roadmaps launched debate Member States to develop long-term low emission development strategies

Next step at EU level is to define 2030 policy framework

- **Low carbon roadmap: central role of EU ETS**
- **Energy Roadmap: increasing energy efficiency and fostering renewables as no regret options**

Conclusions

- **Need for clarity for long term investments, especially in ETS sectors, beyond 2020.**
- **In case of fragmented climate action, carbon leakage will remain a key issue which continues to be addressed**
- **Also for Poland economic opportunities through modernisation and innovation, beyond energy savings and air quality and health benefits**
- **relevant but manageable transition challenges, justified debate how a fair post 2020 framework could look like**

Thank you for your attention!

More information:

<http://ec.europa.eu/clima/policies/roadmap>

Climate change threatening future economic growth

