Energy Economic Developments in Europe

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Background

• **2030 Framework on Energy and Climate change**

• *Report on energy prices and costs – May European Council Conclusions*

• *Discussions in the EPC WG on climate change and energy (May and November 2013)*
Outline

• Part I - Competitiveness:
  • Unit Energy costs in Europe, Member States and international partners.
  • Recent developments: shale gas in the US and impacts on the EU.

• Part II - Price drivers:
  • Electricity and Natural Gas price drivers
  • Carbon price drivers

• Part III - Renewable developments:
  • Renewables developments in the EU and the world
  • Drivers to trade in renewable equipment
  • Avoided fuel costs
Main Findings
Energy costs have been on an increasing trend in both the EU and the rest of the world since 1995.

- Energy costs as % of valued added of the EU manufacturing sector is among the lowest in the world.

Source: European Economy 1/2014
Drivers of energy cost competitiveness: a decomposition of unit energy costs

- The price of energy in the EU (and Japan) is among the highest in a global comparison.
- EU manufacturing has adapted to high prices by specialising in low energy intensity and high value added production.
- EU has improved its energy intensity since 1995 but US and especially China are catching up.
Evolution of real unit energy cost: restructuring effect?

Source: European Economy 1/2014
Electricity and Gas Prices: Empirical Findings

- **Fossil fuels** remain the key drivers of electricity and gas retail prices.

- In electricity market, **market competition** lowers the retail prices, while the penetration of less mature RES technologies have the opposite effect.

- In most cases the burden of supporting schemes is distributed unevenly to consumer categories.

- In natural gas market, lowering import dependency and improving security of supply have greater downward price effects, relative to gas to gas competition.

- In both markets **regulated prices** might lead to cross-subsidies across consumer groups.
Carbon prices drivers: empirical findings

Source: European Economy 1/2014
Trade in renewable energy components: Revealed comparative advantages

Average Revealed Comparative Advantage Indexes of solar and wind industries in the EU-27, USA, China and Japan

- EU has a significant trade deficit in solar and a small surplus in wind components
- EU has revealed a comparative advantage in wind components (high RCA index value)
- EU has a revealed comparative disadvantage in solar components (low RCA index value)

Source: European Economy 1/2014
Renewable energy: avoided imported fuel costs

- Renewables allow Member States to save part of imported fuel costs
- Avoided imported fossil fuel costs: some EUR 30 billions in 2010
- These avoided import costs expected to rise in future with higher RES production and rising world fossil fuel prices

Source: European Economy 1/2014
Link to the publication