



A sustainable and affordable energy transition: how far and at what cost?

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European Energy policy:

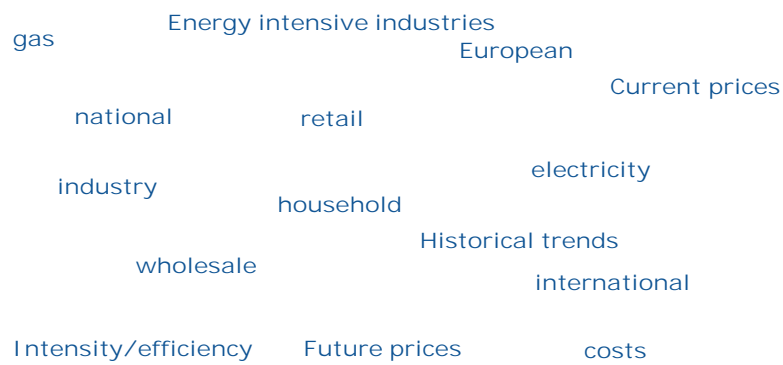
- Sustainability
- Competitiveness/affordability
- security of supply...

Top priority?





January package included the energy prices and costs report:



The competitiveness angle... what to do about rising costs?

- Complete the internal (wholesale and retail) market: competition brings cost savings
- Switch energy supplier
- Minimise network costs with best practice
- Keep (energy financed) energy and climate policies cost effective
- Use more energy efficient products and processes
- Where necessary, protect vulnerable households and exposed industries

2030 policy



- Building on 2020
 - 40% GHG reduction target
 - 27% renewable energy target
 - Ambitious energy efficiency needed
 - Flexible governance
 - Cost effective policies
 - Cost effective policies
 - Cost effective policies

• Energy security!

Consistent goals



- Sustainability & decarbonisation can increase diversity & variety, reducing supply risks and increasing resilience
- Better functioning markets (and infrastructure) increase competition and lower energy costs & increase scope for diversifying supplies
- more energy efficient products and processes reduce energy import dependence, import bills, emissions
- New technologies diversify supplies, develop indigenous resources, boost industry

Costs/affordable?



- Stern report? (costs of climate change at least 5% - 20% of GDP p.a.)
- Avoiding Russian gas - \$33bn p.a. (Bernstein research)
- EU 2030 policy cost estimates:

Total System Costs, avg annual 2011-30 (bn €)	2,074-2,089
Total system cost as % of GDP increase compared to Reference in 2030 in % points	0.15% - 0.54%
Investment Expenditures ¹⁴³ , avg annual 2011-30 (bn €)	846 - 879
Energy Purchases, avg annual 2011-30 (bn €)	1,421 - 1,446
Fossil Fuel Net Imports, avg annual 2011-30 (bn €)	439-457
Average Price of Electricity ¹⁴⁴ (€/MWh)	174-181
ETS price (€/t of CO ₂ -eq.)	22-53
Energy costs for Energy Intensive Industries ¹⁴⁵	42.1%-44.5%
Energy related expenditures of households ¹⁴⁶	9.4%-9.6%
GDP impacts	GEM E3: -0.15% to -0.10% E3MG - E3ME: 0.0% to -0.55%
Employment impacts	GEM E3: -0.61% to 0.20% E3ME: 0.3% - 0.5%

European Energy policy:

- Sustainability
- Competitiveness/
affordability
- security of
supply...

Top priority?



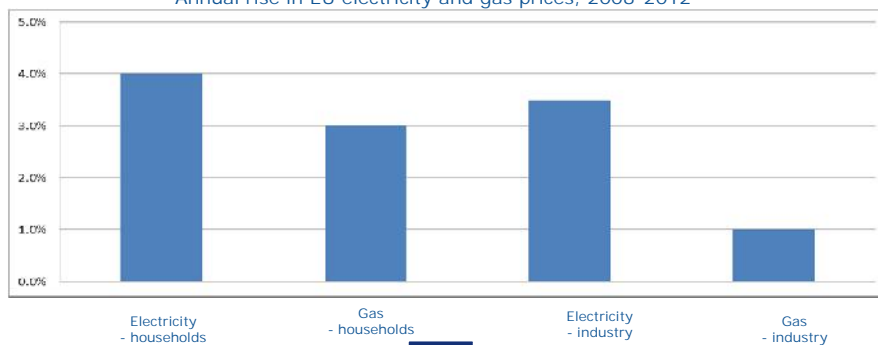
Spare slides

January package included the energy prices and costs report:

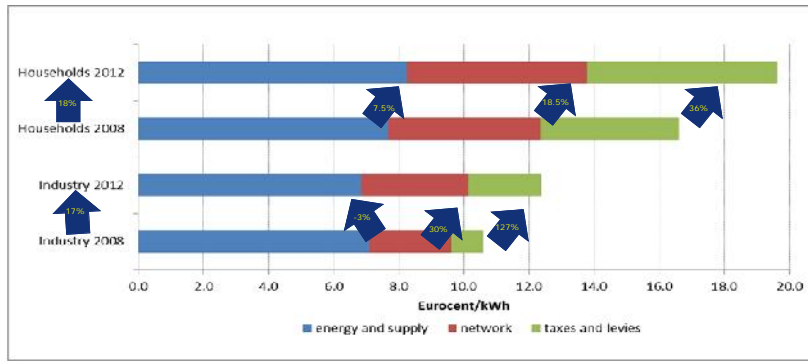
In the EU: data 2008-2012

- Retail prices have risen, often above inflation, mainly driven by...

Annual rise in EU electricity and gas prices, 2008-2012

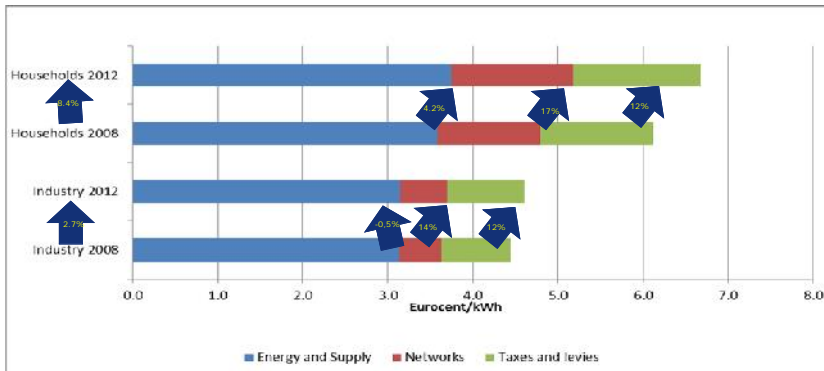


What has driven electricity prices?



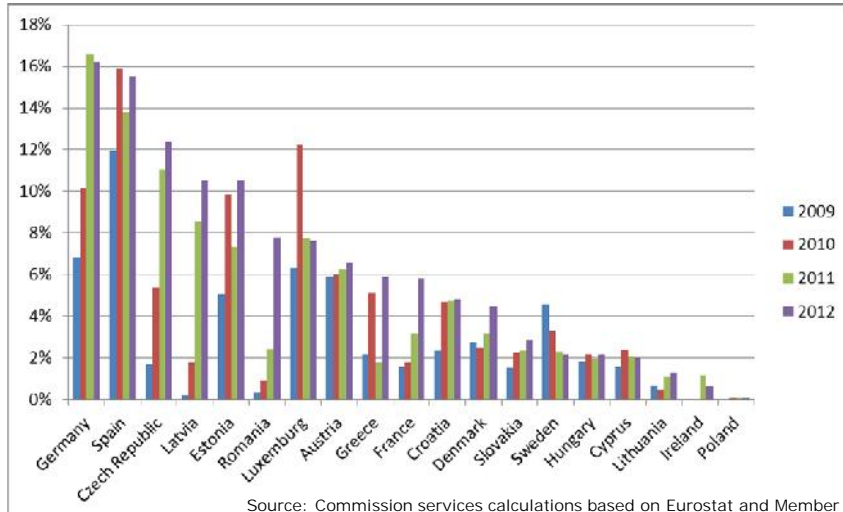
Source: Eurostat. Includes taxes in the case of households; excludes VAT and other recoverable taxes in the case of industry but other industry exemptions are not included (not available).

What has driven gas prices?



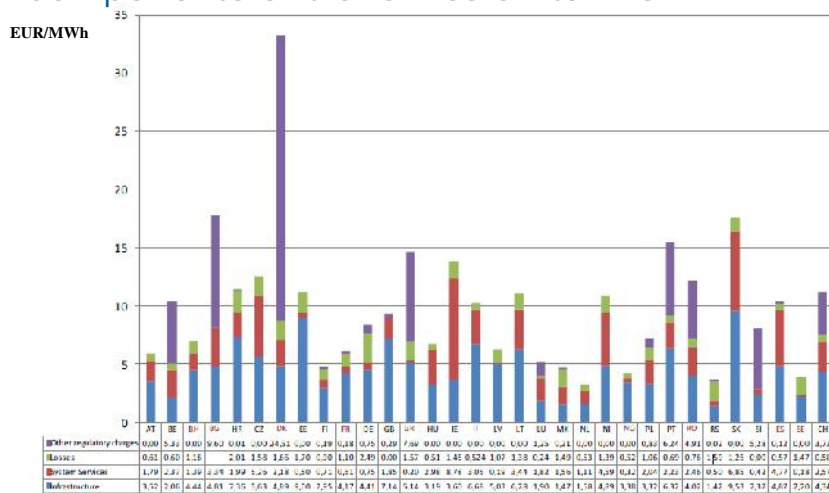
Source: EC, Metadata Member States. Includes taxes in the case of households; excludes VAT and other recoverable taxes in the case of industry.

Renewables costs as a share of electricity price



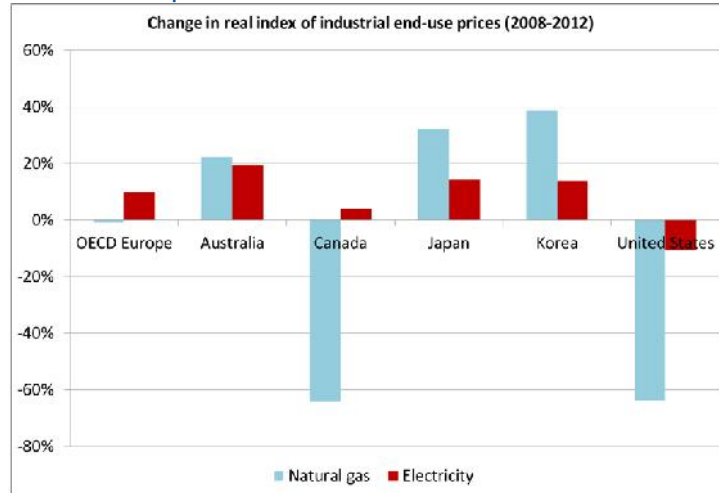
Source: Commission services calculations based on Eurostat and Member State data

Components of transmission tariffs



Source: ENTSO-E Overview of transmission tariffs in Europe: Synthesis 2013

Price developments 2008-2012

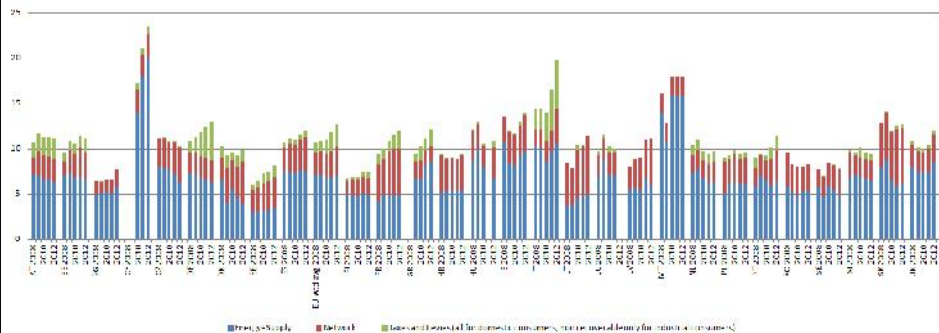


Source: IEA, European Commission calculations

Major national variations...

Retail prices for Electricity, industrial consumers, Band IC (500 MWh < Consumption < 2 000 MWh); 2nd half 2008 - 2nd half 2012; cents Euro / kWh

Source: Eurostat, Energy Statistics

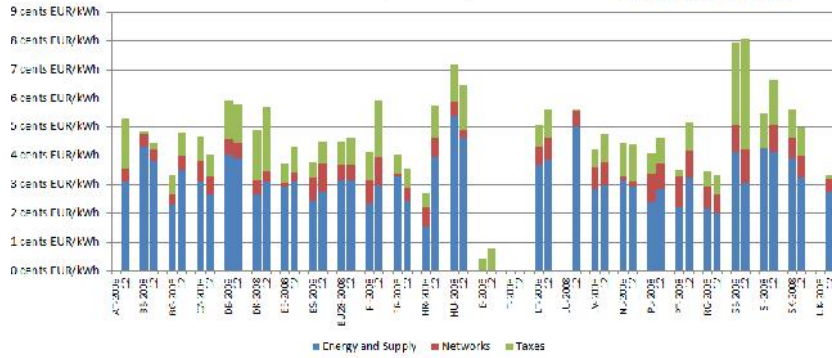




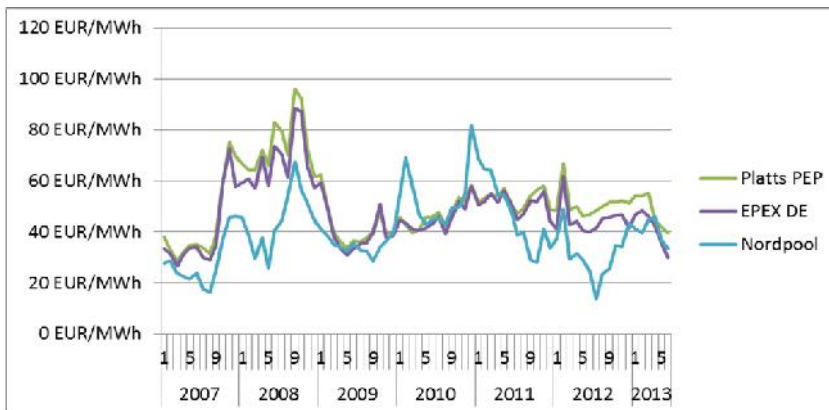
Major national variations...

Prices by component, nat. gas, industrial consumers, Band I3 (10 000 GJ < Consumption < 100 000 GJ), cent EUR / kWh

Source: EC, Eurostat, Member States



Retail Vs wholesale electricity prices





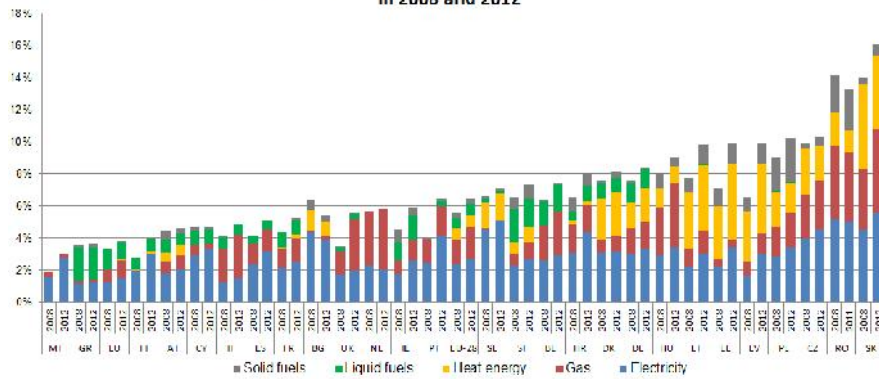
Retail Vs wholesale gas prices



Source: Platts and BAFA

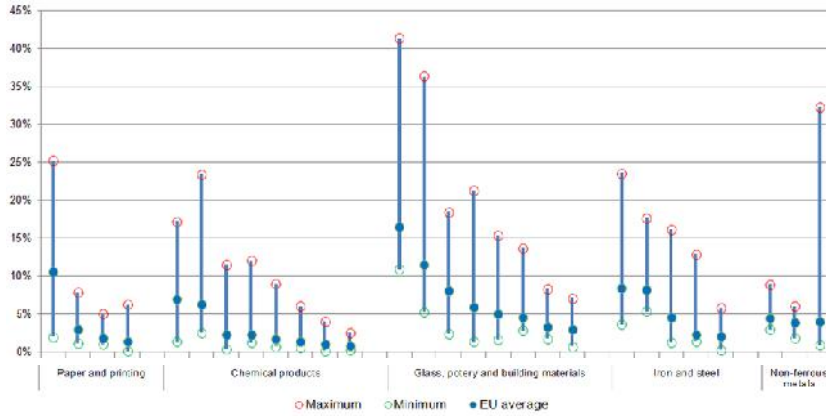
Changing energy household costs

Weights of household energy products in the Harmonised Index of Consumer Prices in 2008 and 2012





Varying energy intensive industry costs



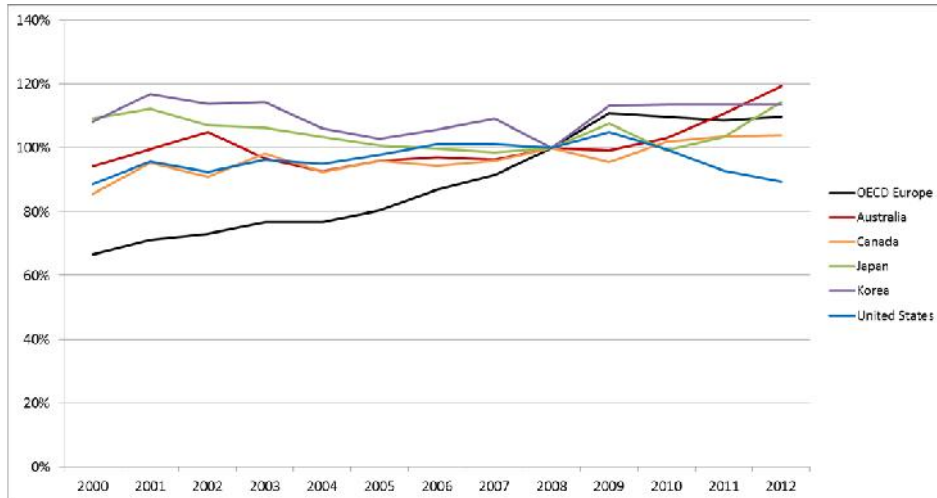
The share of energy costs in production costs in energy intensive industries

(Different bars are sub-sectors, with lowest, highest Member State values and EU averages, 2010)

Source: Eurostat, Structural Business Statistics

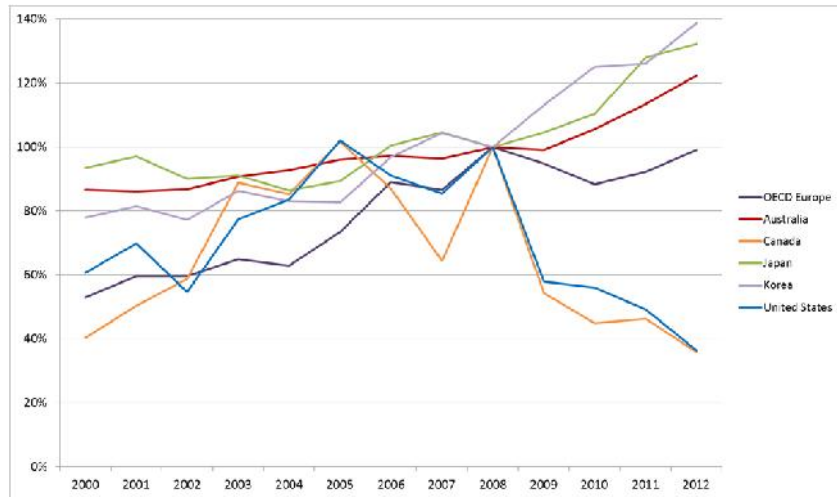


Global industrial electricity price index



Source: IEA, European Commission calculations

Global industrial gas price index



Source: IEA, European Commission calculations