



Unit Energy costs in Europe, Member States and international partners

Åsa Johannesson Lindén, Dep Head of Unit
European Commission, DG Economic and Financial Affairs
Impact of EU policies on national economies

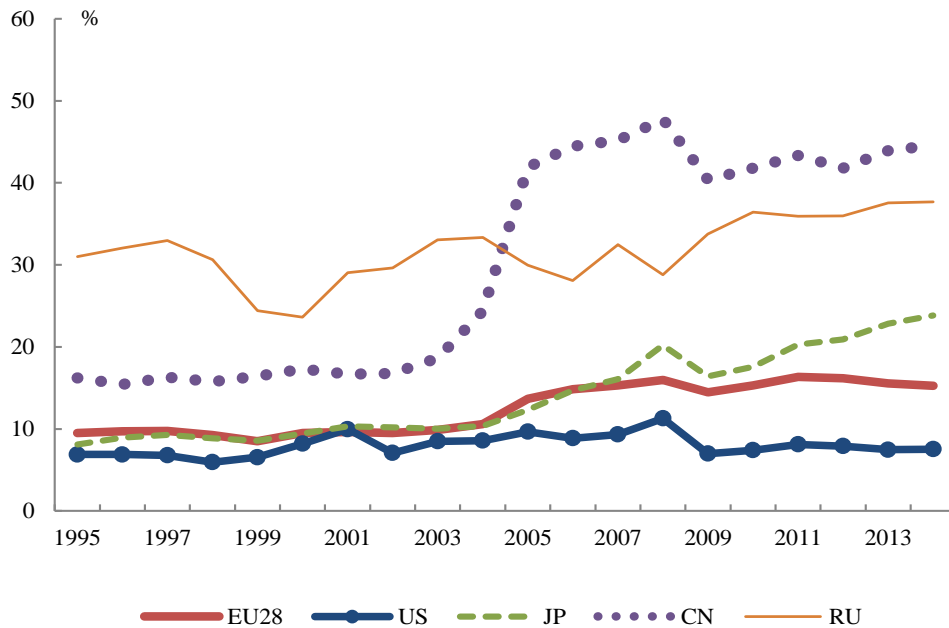
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Context

- ❑ DG ECFIN developed a methodology in 2014 (*Energy Economic Developments in Europe, European Economy*) to assess energy cost competitiveness based on the concept of the Unit Energy Costs (UEC).
- ❑ This study was part of the 2030 energy package and recently the indicator of UEC was included also in the Monitoring report published with the State of the Energy Union Report.
- ❑ The indicator of UEC measures the energy cost per one unit of value added, in a given sector or in an aggregation, and enables the comparison of the relative importance of energy inputs.
- ❑ The current analysis covers the EU, its MSs and some international partners, and focus on the development of RUEC and its key determinant factors i.e. real energy price and energy intensity over time, while disentangling the effect of industrial restructuring on the growth of RUEC.

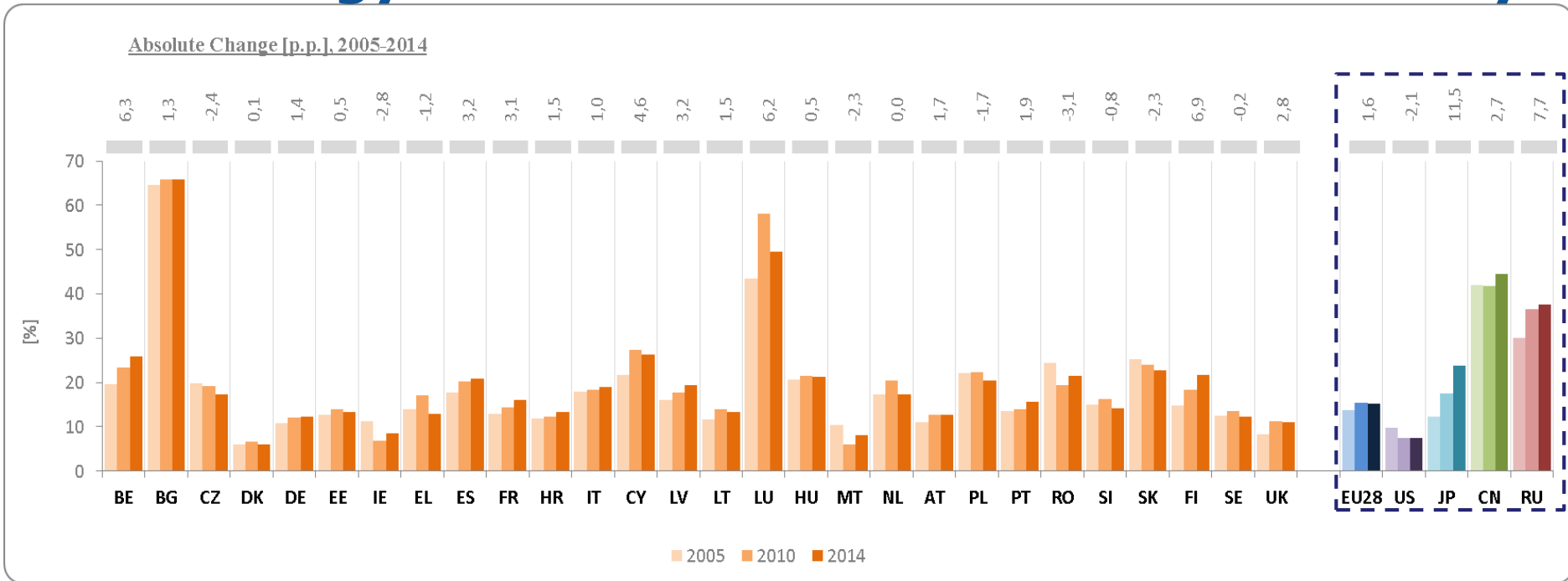
Unit Energy Costs in Industry: Global Comparison

Real Unit Energy Costs as % of value added,
manufacturing sector (excluding refineries),
1995-2014



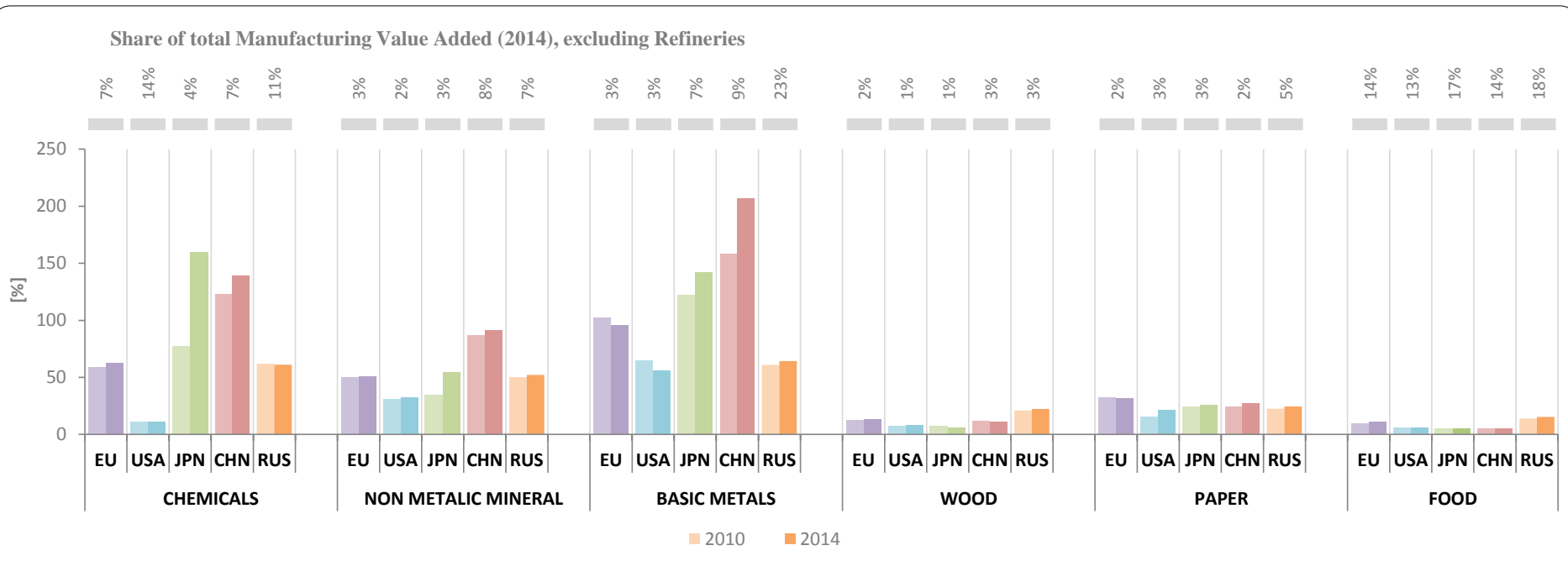
- ❑ Energy cost has been on an **increasing trend** since 1995 until 2014. The exception is the US and the EU after 2008 where prices remained stable.
- ❑ Energy costs as % of valued added of the EU manufacturing sector is among the **lowest in the world**

Unit Energy Costs in Member States and Globally



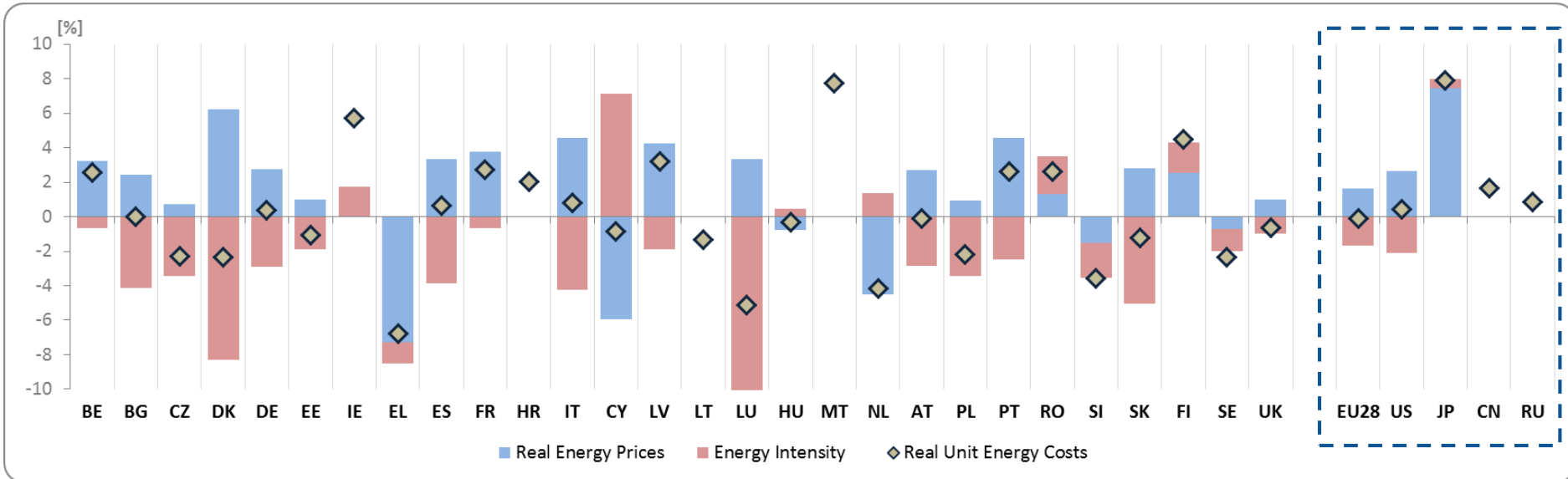
- ❑ RUECs in some Member States were significantly lower than the EU average, while Bulgaria, Cyprus and Belgium were the Member States with the highest RUECs
- ❑ Only a few MSs have faced decreases in RUECs between 2005-2014 in the EU, and US globally

Sectoral breakdown: RUEC in MSs and Globally



- ❑ EU presents, in general, the second lowest RUECs in energy intensive industries, just above those in the US
- ❑ Basic Metals record the highest REUCs among energy intensive industries, followed by Chemicals and non-Metallic Mineral sectors
- ❑ The REUCs remained stable only in the EU and the US between 2010 and 2014

Annual Growth Rates 2010-2014, Manufacturing (excl. refineries)



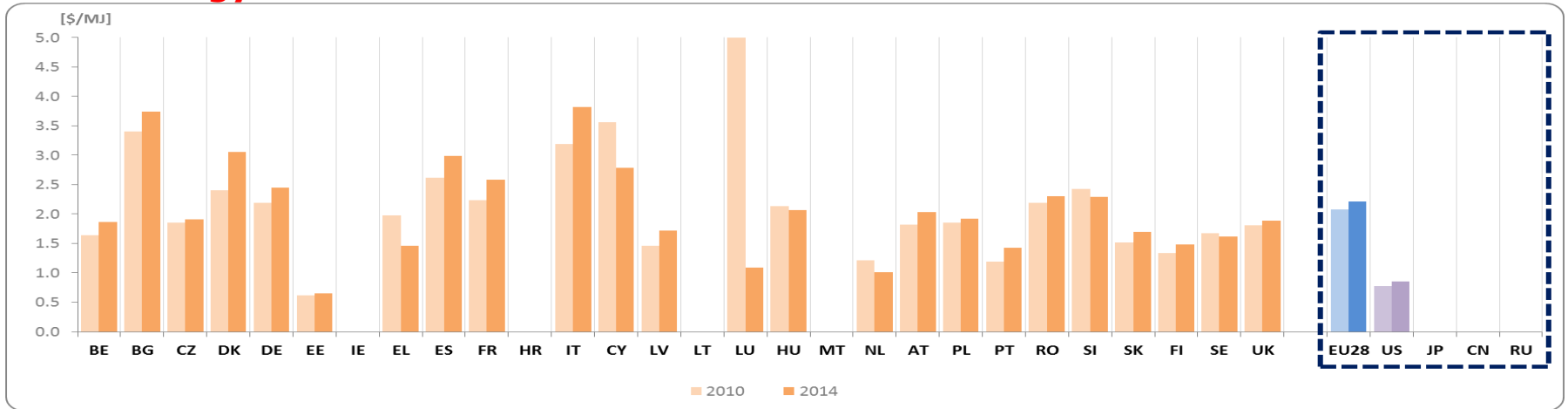
- ❑ RUECs in the EU and US have evolved in a very similar fashion and their growth have been almost the same, together with that of Russia
- ❑ The growth rates in the EU and US were marginal because the differentials in real energy price levels have been matched lower levels of energy intensities
- ❑ The growth of RUECs is dispersed across MSs, with negative changes mainly driven by energy savings and positive changes by energy prices



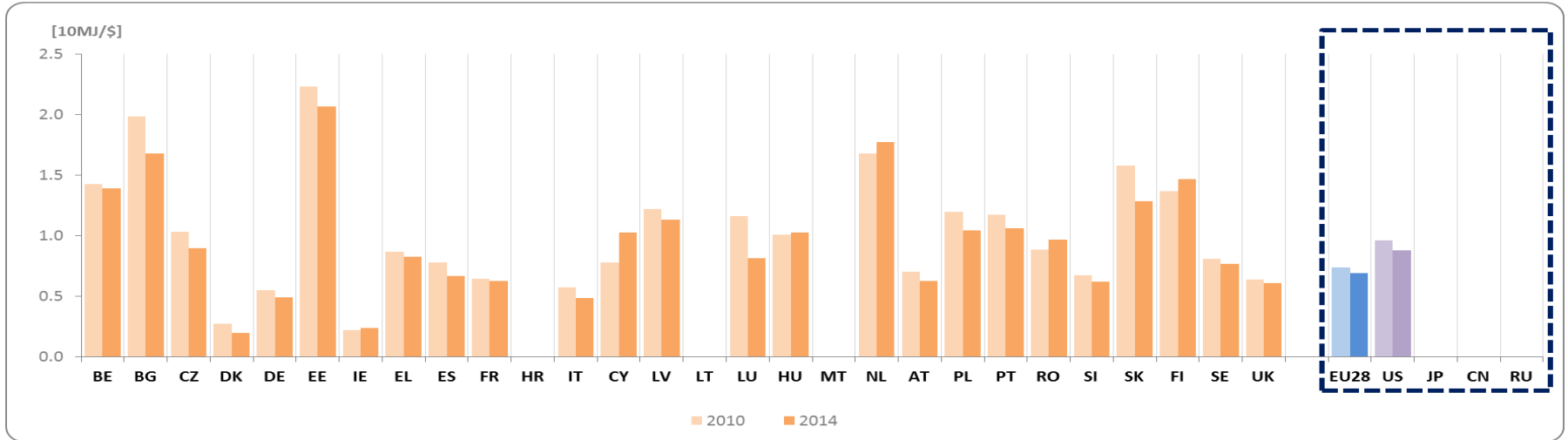
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Decomposition of RUEC at MS level and globally

Real Energy Price

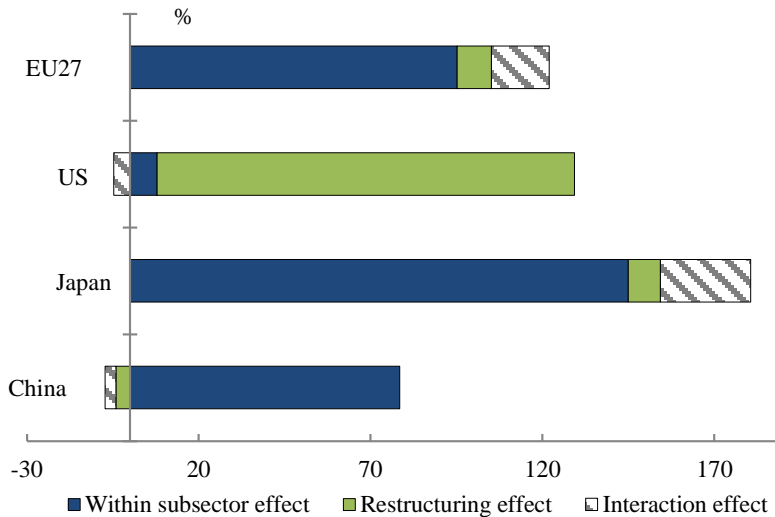


Energy Intensity

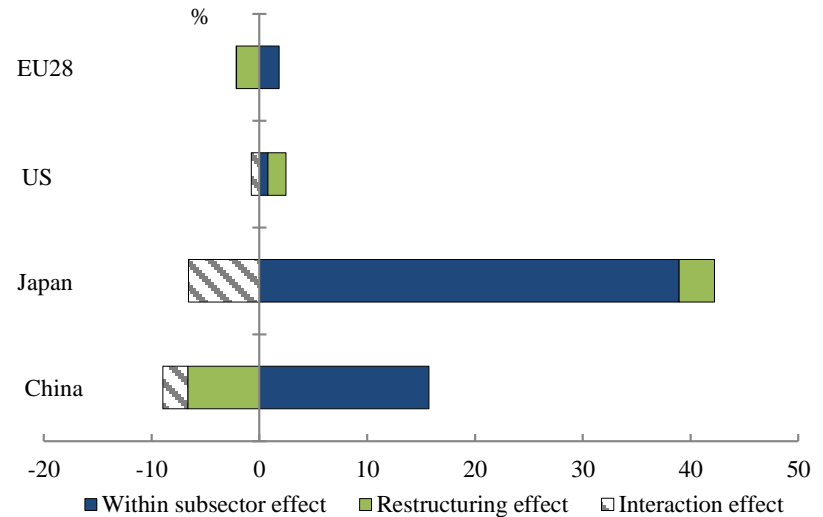


Evolution of Real Unit Energy Cost: Restructuring effect?

Shift share analysis of manufacturing sector RUEC growth 1995-2011



Shift share analysis of manufacturing sector RUEC growth 2010-2014



- ❑ **1995-2011:** the growth of RUEC was mainly driven by the within effect, except for the US where its RUEC growth was dominated by the restructuring effect
- ❑ **2010-2014:** only in the EU and China the restructuring effect put downward pressure on their RUEC's growth, implying that there was a shift towards sectors with lower energy costs
- ❑ In Japan and China the within effect is highly pronounced compared to the EU and the US

The recent development of RUEC and its impact on EU competitiveness - Conclusions

High energy costs for EU industries should remain a policy concern, even more so if the EU-US energy price gap continues to increase:

- ❑ The EU industry managed to offset ,partially, the increase in real energy prices through improvements in its energy intensity
- ❑ Wood, Paper and Food appear to be less susceptible to energy price shocks than Chemicals, Basic metals and Non-Metallic mineral based on their RUEC levels
- ❑ The dispersion of RUEC across MSs remains relatively high, especially over the recent years
- ❑ Bulgaria, Cyprus, Belgium, Slovakia and Finland seem to be most exposed to energy price shocks, while the UK, Ireland and Denmark seem to be the least exposed MSs
- ❑ The restructuring effect of EU industries was more pronounced during the period 1995-2011 than that of 2010-2014, implying that that the main driver of the RUEC's increases is the energy price developments



Thank you very much for your attention!

28/03/2017