

Design and impact of a harmonised policy for renewable electricity in Europe



Interacting aspects and policy design considerations for burden sharing agreements and future exemptions of EU energy intensive industries

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The main argument for a reduced or a total exemption for energy intensive industry, towards financial burden for RES-E development or other schemes, relates to **the disadvantages the increase in electricity costs** will have on the **international competitiveness** of selected industrial branches and industrial processes...

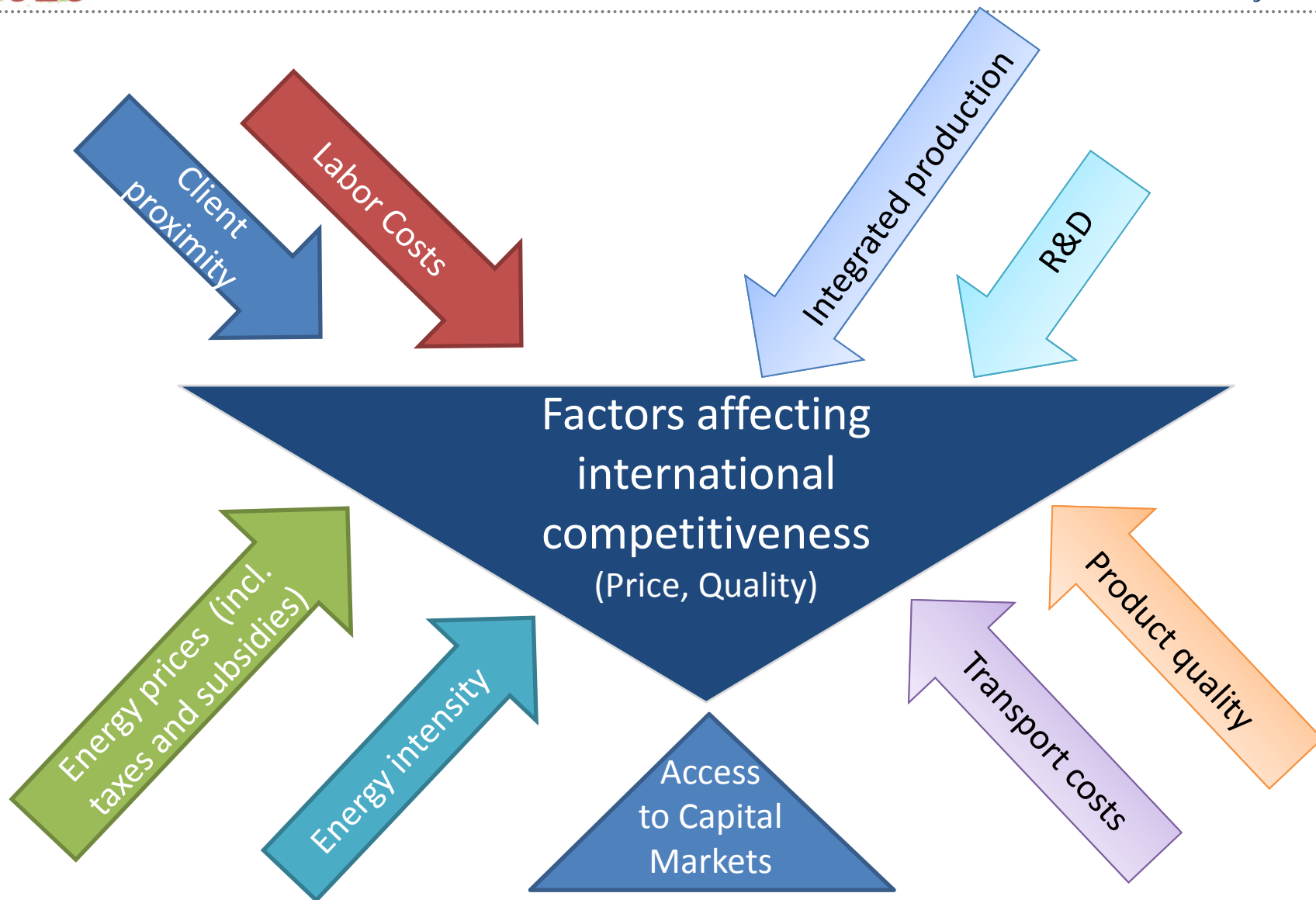
...to ensure that the competitiveness of the EU energy intensive industries is not jeopardized by high energy costs...

Initial analysis on how burden sharing agreements with **energy intensive industries** should be designed in future policy proposals and highlight interacting aspects with other emerging policies.

1. Indicators used for providing privileges
2. Influencing factors for international competitiveness
3. Relevance of electricity costs for inter. Competitiveness
4. Considerations for future policy design

Criteria used for privileges

- Different Criteria/Indicators across the EU MS are used for providing **reduced contributions, (so called “privileges”)** for energy intensive industries for electricity taxes, EE payments, co-generation, etc. These relate to:
 - Total electricity consumption for industrial branches (GWh)
 - Electricity demand intensity (turnover, GVA)
 - The voltage level of the network connection
 - Production process (electricity intensive)
 - The peak load, individual production, energy management systems, etc.
- Not only RES-E aspects are considered but also co-generation contribution, Grid payments, social contributions, etc.



Overview of Indicators for international competitiveness

Indicator	Description	Area
Market share (Production or Revenue)	Shows the concentration of production	Industry, Sector, National
Absolute output/ Production volume	Shows the absolute Size and Value of an Industry or a Sector	Industry, Sector
Relative Trade Shares	Shows trading structure respectively degree of speciliaziation of a country with help of Import- and Export data	Industry, Sector, National
Trade Intensity Indicator	Ratio of Imports and Exports to the total Revenue of a specific sector gives information of the environment where the sector competitiveness prevails between domestic and non domestic industries	Sector
Global market price for selected products.	The existance of a global market price means that there are industries which have an international participation worldwide. It also indicates the existance of an homogenic product (quality differences play a minor role)	Sector
Scope/Range of the Product Yield on turnover	The range of a product varies, e.g.: Transport costs	Sector
Learning index, learning rates, progress rations	Theoretical value that gives the difference between achieved sale prices and the marginal costs of the production	Industries, Sectors

Source: Deloitte, 2013, WEF, 2012, Legler, 1985, ISI, et. al., 2012

Dependency of
Company on
Electricity factor

(Sector, Company,
Country)

Total elec. demand

Total elec. costs

Internat. context:
– Elect. Costs Effect
on prod. Factors
– Sector/Company/
Country

Indicators to measure Electricity vs. int. competitiveness

Effect of high elec.
Prices on products
dependent on the
elec. cost share

Elec. Costs relative to
Value added/Turnover

Products with higher
Elec. Intensity are
more affected by the
development of elec.
costs

Elec. Intensity:
Elec. Cons./VA/Tur

If the objective is to provide privileges based on international competitiveness arguments to EU energy intensive industries... only few indicators can identify the companies and branches which international competitiveness is considerably affected by higher electricity prices...

- **Trade intensity:** The only indicator that allows an identification based on the proposed criteria. For selected products/industries the world price could be added.
- **Electricity intensity (costs and demand):** are adequate indicators for the electricity vs. international competitiveness, however, these should be relative indicators calculated based on turnover, value added or production value.
- **Challenges:** Incentives for future privileges for EU EII should be evaluated with Energy Efficiency Measures and Policy Objectives, as the privileges might lead towards less acceptance with EED.
- **Recommendation:** couple the privileges with Monitoring and EMS.
- **Set clear criteria:** to assess these indicators clear criteria such as (data availability, transaction costs, avoid misuse of reported Data by companies, inclusion accurate indicators, ...)

Through a series of exemptions criteria, **industries can be identified** as if they belong to internationally active industries and if the electricity costs affect them in any way as for competitiveness refers.

Most of the indicators to participate in tax reforms and exemptions mechanisms should satisfy the following proposed requirements:

- **Accuracy of the indicator:** Only when an indicator captures the competitive situation or the importance of the energy costs of an industry, then can the industry be denominated as affected.
- **Data availability and transactions costs:** The provision and determination of the data should take the lowest administrative effort. The selection of the required data must be subjected also to juridical verification
- **Incentives effect vs. other policies:** The goal of the conflict in case of affecting other political goals should be minimized to the least possible.