



External costs of energy and their internalisation in Europe

Cost-effective internalisation and international competitiveness

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Introduction

- ✓ Internalising negative environment externalities make polluters bear all costs of production, including environmental costs
- ✓ How best to analyse the economic impacts of European environmental policy on business and its competitiveness
- ✓ Quantification of externalities for a direct use in cost-benefit analysis and impact assessment of environmental policy
- ✓ Implementation and choice of policy instruments

Competitiveness

- **Competitiveness at the macroeconomic level**
 - ✓ “Ability of an economy to provide its population with high and rising standards of living and high rates of employment on a sustainable” (European Competitiveness report 2001)
- **Competitiveness at the level of firms/industry**
 - ✓ Price & cost developments
 - ✓ Other factors affecting economic performance

Impact Assessment

- **The effects of environmental policy on European business and its competitiveness. A framework analysis - SEC(2004)769**
- ✓ Offer guidance on how best to analyse the *economic* impacts of *European* environmental policy on business and its competitiveness
- ✓ Identify the mechanisms and effects to be considered
- ✓ Assess the appropriateness and cost-effectiveness of the policy design

Costs to Business

- **The notion of costs (opportunity costs)**
 - ✓ Direct: regulated sector
 - ✓ Indirect: downstream and upstream
- **Three main channels of transmission**
 - ✓ Availability, and price of inputs (e.g. higher energy prices)
 - ✓ Restrictions on the production process (e.g. emission limit values)
 - ✓ Availability, performance, price of outputs (e.g. fuel efficiency of cars)
 - ▶ The first two channels have an impact on competitiveness (burden on EU producers only)

Effects of Costs to Business

- ✓ Short-term effect: lower **productivity**
- ✓ Long-term effect: lower level of spending on **R&D** in the regulated sectors may have negative effects on the firm over time
- ✓ Regulations that target the production process or change the availability and price of inputs such as energy may discourage **investment** in additional capacity in the EU and undermine environmental goals in case of relocation

Quantification of externalities

- ☺ The use of a common metric (explicit monetisation) allows direct comparison of different types of effects
- ☺ The evaluation of impact in monetary terms requires knowledge which has been improved over the past decade
- ☹ Further progress should be done to extend the scope of the quantifiable externalities as the integration of a multi-criteria decision analysis with monetisation is not an ideal solution
- ☹ No consensus has been reached concerning the valuation of health impacts (VOLY vs VSL)
- ☹ The results are subject to uncertainty and have to be used with caution in cost-benefit analysis

Implementation

- More market-oriented approach
 - ✓ Policies should try to exploit as much as possible the driving forces embedded in market transactions, with the use of economic incentives replacing command-and-control requirements, are more cost-effective.
 - ✓ Market-oriented alternatives that may be considered include fees, subsidies, penalties, marketable permits or offsets, changes in liabilities or property rights
- Regulation
 - ✓ Where a specific regulatory approach is required, the proposed action should be the most cost-effective, including elements of flexibility to the extent feasible