Competitiveness and the EU-ETS
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European Commission Stakeholder Workshop
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Asset stranding is not limited to the fossil fuel companies

Stock market performance of a major European utility

Two possible courses of action for the energy intensive industry

- Defend status quo
- Continue less efficient production processes
- Government regulation strands assets

- Embrace change
- Catch up with Asian competitors in terms of efficiency – and overtake them
- EU regulation a driver of competitiveness
Emerging regulation in other regions creates new opportunities
Carbon can only leak if there is a major market it can leak to

Some examples of emerging carbon regulation

Carbon tax
Regional ETSs and performance standards
ETS or tax considered
Regional ETSs and nationwide ETS from 2015?
Regional ETSs and high energy prices
ETS derailed

Source: World Bank
The EU-ETS price is amongst the lowest in the world

Price of carbon in USD in 2014 (examples)

Number of countries with ETSs

- Implemented: 40
- Implementation scheduled: 2
- Under consideration: 8

Number of countries with carbon taxes

- Implemented: 12
- Implementation scheduled: 1
- Under consideration: 2

Policy-makers have a choice between taxes and trading

*If we do not repair the EU-ETS, we may end up with national taxes on a much higher level*
Whatever strategy companies choose, carbon pricing supports their competitiveness

<table>
<thead>
<tr>
<th>Cost leadership</th>
<th>Differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Standard offer for a lower cost than the competitors</em></td>
<td><em>Upward and downward differentiation</em></td>
</tr>
<tr>
<td>Economies of scale and size</td>
<td>About process as much as the product offering – efficient processes can differentiate the organisation</td>
</tr>
<tr>
<td>Learning effect/economies of learning</td>
<td>Differentiation potential exploited across the value chain, looking to the organisation and its buyers</td>
</tr>
<tr>
<td>Innovation and substitution of labour by capital</td>
<td></td>
</tr>
<tr>
<td>Input costs</td>
<td></td>
</tr>
<tr>
<td>Capacity utilisation &amp; residual efficiency</td>
<td></td>
</tr>
</tbody>
</table>

The organisation with the highest accumulated output, the longest experience and the biggest market share benefits from a significant cost advantage

The higher the experience effect in the industry, the larger the cost advantage of the market leaders

Carbon pricing accelerates the experience effect

The organisation is as profitable as a cost leader

Carbon markets create a reward for efficiency and thus support process excellence

Source: adapted from Hadida & Porter
The price of energy does not determine competitiveness; price differentials are still caused by differences in natural resource endowments.

**Energy intensity in the major markets in 2011 (BTU per year per USD of GDP)**

- China
- Canada
- United States
- Europe
- Japan

**Retail electricity prices in 2012: industrial consumers**

- Japan
- EU
- China
- US
- Canada

**Average industrial energy purchase costs related to the total production costs in 2010 in the EU**

- Transport & equipment
- Machinery
- Food, drinks and tobacco
- Industrial average
- Textile, leather & clothing
- Wood and products
- Chemical industry
- Non-ferrous metal
- Paper and printing
- Glass, pottery, building materials
- Iron and steel
- Ore-extraction

*For most industries, the cost of energy is not a major factor*

Source: EIA, European Commission
Despite the crisis and “despite” the 2020 climate-energy framework, industrial output in the EU has stayed constant.

The EU level of industrial production recovered quickly from the crisis but has been falling behind the OECD average since then.

With strong renewables support, German industrial output has been increasing faster than the OECD average.

Are energy prices truly to blame for the EU falling behind? UK energy prices are lower than the EU average but the country has been shifting rapidly towards services.

Factors determining the competitiveness of countries:

- Institutions
- Labour market efficiency
- Infrastructure
- Financial market development
- Macroeconomic environment
- Technological readiness
- Health and primary education
- Market size
- Higher education and training
- Business opportunities
- Goods market efficiency
- Innovation

Source: OECD, WEF
Competitiveness rankings show that environmental and social criteria go hand in hand with overall country competitiveness; the Kyoto Protocol sparked major jumps in innovation.

GCI score, social sustainability-adjusted GCI, environmental sustainability-adjusted GCI

Post-Kyoto growth in patenting for clean energy technologies (CETs)

- The Kyoto Protocol and its implementation in the EU sparked a shift in R&D activity from fossil to clean technologies and a large boom in CET patenting activity.
Competitiveness is a whole-of-the-economy issue

Key messages

- Emissions trading has had a positive impact on competitiveness in many cases...

- ... and the ETS has to be repaired before 2021

- As investors, we look at the competitiveness of the whole economy
  - If the world economy suffers from increased climate change impacts, our investments will suffer and so will the citizens that have provided the money to us
  - The impacts of climate change will have to be paid for by somebody, which is often the government

- The threat of carbon leakage is constantly reducing due to measures in other jurisdictions

- However, if there is a threat of relocation, we support some limited exemptions – but only for companies really at risk of international competition

- The number of companies and sub-sectors at risk is small, but very vocal

- To stay in business in the long-term, energy intensive industries should accelerate their transition
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