

**Industrial Competitiveness under Climate Policies:
Lessons from Europe**

**Testimony of
Steven Fries, Chief Economist for
Royal Dutch Shell**

**Submitted to
the European Affairs Subcommittee
Foreign Relations Committee
U.S. Senate**

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Chairwoman Shaheen and members of the subcommittee, thank you for this opportunity to testify on the topic of European experience with industrial competitiveness under climate policies. I am Steven Fries, Chief Economist for Royal Dutch Shell.

Shell is a global group of energy and petrochemical companies. With approximately 102,000 employees and operations in more than 100 countries and territories, Shell helps to meet the world's growing demand for energy in economically, environmentally and socially responsible ways. Shell's presence in the United States dates back nearly 100 years, and today we employ more than 20,000 people here and operate in all 50 states.

Looking forward, the energy and climate challenges facing the world are formidable. Much more energy will be needed to support rising living standards, particularly in emerging markets and developing countries. At the same time, carbon dioxide emissions from energy will have to fall substantially to mitigate climate change.

Shell is working on many fronts to help meet these challenges. First, we are controlling emissions from our operations and helping our customers manage their emissions by offering advanced fuels and lubricants. Shell is searching for better biofuels and building a capacity for carbon capture and storage, a critical technology for managing emissions from fossil fuel use.

We also provide input into the shaping of government policy, including building support within industry for an effective climate policy. In the United States, Shell is a member of the U.S. Climate Action Partnership and supports the introduction of a cap and trade system. In Europe, Shell is an active member of Prince of Wales' UK Corporate Leaders Group on Climate Change. Shell also works within the oil and gas and chemical industries and with governments and the European Commission to promote effective climate policies.

Key priorities for Shell in its European climate policy advocacy are measures to address competitiveness and emission leakage issues in Phase III of the EU Emission Trading System (ETS) and funding to support a series of demonstration projects for

carbon dioxide capture and storage so that the technology could be deployed at scale by around 2020 if proved effective.

I will focus today on the competitiveness issue, which is a particular concern for Phase III of the EU-ETS that will run from 2013 to 2020. While in the first two phases of the system most emission allowances were allocated initially to producers for free, in the third phase there will be a transition toward auctioning of emission allowances in those sectors and sub-sectors that are not at serious risk of emission leakage.

Our analysis of this issue in industrial sectors where Shell operates in Europe – upstream crude oil and natural gas production, crude oil refining and petrochemicals – leads us to conclude that the potential impacts are significant, but that they can be managed through well-designed policies such as those being implemented for Phase III of the EU-ETS.

Competitiveness and emission leakage under climate policies

The impact of climate policy on competitiveness is potentially most pronounced for those industries that are energy intensive and whose products are traded in global markets (trade exposed.) These industries will face higher costs with the implementation of a cap. However, their product prices are set in international markets and their ability to pass on higher costs from the cap into product prices will be limited if foreign producers do not face similar emission constraints.

These costs can be much higher than just the direct cost of purchasing and using allowances to cover emissions. Industries also face a host of indirect costs such as higher fuel prices and higher electricity prices. There are also costs associated with abatement, including the purchase of new technology and the cost of process changes needed to cut emissions.

These higher costs could ultimately drive investments and production capacity to countries with no climate policies. That means driving jobs offshore. Unless you have a well-crafted climate policy, the potential for job loss can be substantial. Carbon leakage from the movement of industry to countries that do not have climate policies also reduces the cost-effectiveness of the cap.

In the long run, Shell believes the potential problems of job loss and carbon leakage can be addressed through a strong multilateral framework that requires all major economies to contribute fairly to the global climate effort. However, the principle of the United Nations Framework Convention on Climate Change of “common but differentiated responsibilities” means that there will be a transition period during which the global competitive landscape will be uneven. Managing this transition effectively is a key to advancing climate reforms.

Shell assessment of European competitiveness and emission leakage issues

Shell has analyzed the competitiveness impact of Phase III (auction phase) of the EU-ETS for the three previously mentioned Shell industries that operate in Europe. Shell concluded that the potential for carbon leakage and an impact on competitiveness are a serious concern for Shell's energy-intensive sectors open to international trade.

1) EU refining could face a significant loss of competitiveness and a high rate of emission leakage in its export markets (primarily the United States) in the absence of similar emission constraints on the United States and other producers. Ongoing and planned refinery capacity expansion in south Asia and the Middle East pose a significant medium-term competitiveness concern in EU markets for refined products.

2) In petrochemicals, market structures and trade exposure vary widely across subsectors. Some are globally traded commodity products, such as monoethylene glycol and styrene monomers, in which EU competitiveness impacts and emission leakage could be quite high. Other subsectors, such as polyolefins, are more regionally segmented but with a significant proportion of EU demand met from non-EU suppliers. In these subsectors, the impacts on EU competitiveness and emission leakage could be less pronounced but still significant.

3) EU crude oil production is sold into a globally competitive market, while the market for EU natural gas is more regionally segmented. In many fields, oil and natural gas are jointly produced in largely fixed proportions. These characteristics of EU upstream production point to potentially significant competitiveness impacts and correspondingly high rates of carbon leakage.

Shell remains concerned about the loss of jobs and competitiveness and the potential for carbon leakage under Phase III of the EU-ETS. But we also believe that these concerns can be effectively addressed with effective implementation of Phase III as it is currently designed.

Addressing Competitiveness and Emission Leakage under EU-ETS Phase III

While several potential policy instruments could be used to address competitiveness and leakage issues, Shell advocates the free allocation of allowances in sectors that are at risk of significant carbon leakage. These allowances should be linked to the volume of production with an allocation formula that recognizes process complexities. We think this approach is pragmatic and effective. We do not advocate use of import protection in countries that implement cap and trade systems due to trade retaliation risks.

Key features of our preferred, free allocation approach are 1) the criteria for selecting industrial sectors that are eligible for free allowance allocations and 2) the use of emission intensity benchmarking to calibrate these allowance allocations.

The EC directive for Phase III, in Shell's view, sets out a workable approach. It identifies two quantitative and three qualitative criteria for judging whether a sector or subsector is at significant risk of emission leakage. The two quantitative criteria are:

- The increase in direct and indirect production costs in the sector due to the directive exceeds 5 percent of gross value added and the total value of its exports and imports exceeds 10 percent of value of its turnover and imports.
- Alternatively, the increase in production costs exceeds 30 per cent of gross value added or its import and exports exceed 30 per cent of its turnover and imports.

The three qualitative criteria are:

- The extent to which it is possible for individual installations in the sector or subsector to reduce emission levels or electricity consumption, including the increase in production costs related to the investment that this may entail.
- The current and projected market characteristics, including when trade exposure of production cost increases are close to the above thresholds.
- Profit margins as a potential indicator of long-run investment and/or production relocation decisions.

For sectors judged to be at significant risk of emission leakage using the above criteria, the Phase III directive provides for sector assistance at the rate of 100 percent free allowances to the extent that installations use the most efficient technologies.

The total of potentially available free allowances to a sector in a given year is based on its average share of total emissions from industries covered by the EU-ETS for the baseline years 2005-07 and the overall cap in that year. For example, if a sector's emission accounted for 15 percent of the total emissions covered by the EU-ETS in 2005-07, the total allowances potentially available to the sector in 2013 would be 15 percent of the 2013 cap.

The directive calls for the initial evaluation of sector exposures to emissions leakage to be completed by end 2009 and then every five years thereafter. There is also the potential to change the amount or form of support for these sectors by June 2010, depending on the outcome of the Copenhagen negotiations. While this introduces elements of uncertainty into the policy framework for 2013-20, it provides feedback from experience with the scheme and allows flexibility if international circumstances change.

Conclusion

To conclude I would like to emphasize two key points that emerge from the European experience of competitiveness under climate policies from a Shell perspective. First, the concerns regarding competitiveness losses and emission leakage under cap and trade systems are real. Second, these concerns can be addressed through the use of free

allowances. This is a pragmatic and effective approach during the transition period in which the global competitive playing field will be uneven.

Shell believes the pragmatic approach being followed in Phase III of the EU-ETS will keep jobs and business investments in-country and prevent carbon leakage. Shell also believes it will also be necessary for the United States to take similar steps to protect business investments and jobs. Our U.S. chemical plants and refineries are energy intensive and exposed to international trade. According to EIA statistics, the U.S. reliance on gasoline imports is growing. For the last five years, the United States has imported between 15 to 17 percent of its gasoline from overseas. Ten years ago, that number was approximately 10 percent.

The United States should allocate free allowances to its emission-intensive, trade-exposed industries. The EU approach illustrates how this can be implemented in practice. The bill the Senate is receiving from the House is a strong start toward a workable cap and trade program. In regard to protecting at-risk industries, there is more work to be done. Shell is particularly concerned that the current allowance value allocated to the U.S. refining sector in the Waxman-Markey bill do not cover direct emissions as fully as other sectors are covered.

Shell is committed to helping the 111th Congress enact a fair and effective cap and trade program at the lowest possible cost to consumers and the economy. We recognize the value of such legislation in spurring investment and positioning the United States as a leader in the coming international climate negotiations. We will continue our efforts to improve this legislation as it moves to the Senate. Thank you. I would be happy to answer your questions.