



The Chemical Company

Industrial Competitiveness Under Climate Policies: Lessons from Europe

**Statement of Dr. Wolfgang Weber
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**United States Senate
Committee on Foreign Relations
European Affairs Subcommittee
July 8, 2009**

Introduction

Good afternoon, Senator Shaheen and members of the subcommittee. I am pleased to be here today to represent BASF Group. Thank you for the invitation to testify.

My name is Wolfgang Weber. I am the head of energy and climate policy for BASF Group. In this capacity, I am responsible for policy development and communication of BASF's position on energy and climate matters before the European Union and the governments of member states. In addition, I consult with my BASF counterparts in other countries, including here in the United States, on matters relevant to my portfolio that impact our company.¹

My testimony below explains BASF's work in the area of sustainability and talks about our experiences under the European emissions trading system (ETS). If I could sum up our views briefly at the outset on how an ETS impacts the business of chemistry, it would be as follows:

- chemistry is one of the keys to the sustainable future to our planet, as evidenced by BASF's own 3:1 carbon ratio (see below), which was confirmed industry-wide in a recent study by McKinsey and Company;²
- but, chemistry is an energy-intensive, globally competitive business, one in which regionally unilateral costs from climate & energy legislation cannot be offset by passing them through to customers;
- and, every payment made by the chemical industry for CO₂ allowances, or CO₂ taxes or renewable levies would be equivalent to a production tax and would jeopardize – in the absence of a truly global GHG regime -- the existence of entire value chains and put the entire chemical production system in that region at risk;
- therefore, 100% free baseline allowances for chemistry in any trading system based on benchmarks are critical for not only our survival as a business through the prevention of carbon leakage,³ but the long-term success of any climate protection scheme that involves energy-efficiency and reduced GHG emissions.

And, if I may add one further point before going on, one that is particularly relevant to this subcommittee's jurisdiction: climate protection is a global challenge that requires a multinational solution. No matter the course selected here, or in Europe, or China or India, we must all end at one point – a global accord on climate protection. Then and only then we will seize all the

¹ See attached *curriculum vitae*.

² The McKinsey study was commissioned by the International Council of Chemical Associations. The study found that the products of the chemical industry enable greenhouse gas (GHG) savings 2-3 times greater than their emissions Report summary at <http://www.icca-chem.org/ICCADocs/LCA-executive-summary-english.pdf>. The Öko Institut reviewed the report's calculations.

³ The term "carbon leakage" refers to the loss of jobs to locations without similar a climate control scheme.

greenhouse gas (GHG) efficiency potentials across all sectors and avoid distortions of global competition.

About BASF and Our Commitment to Sustainability

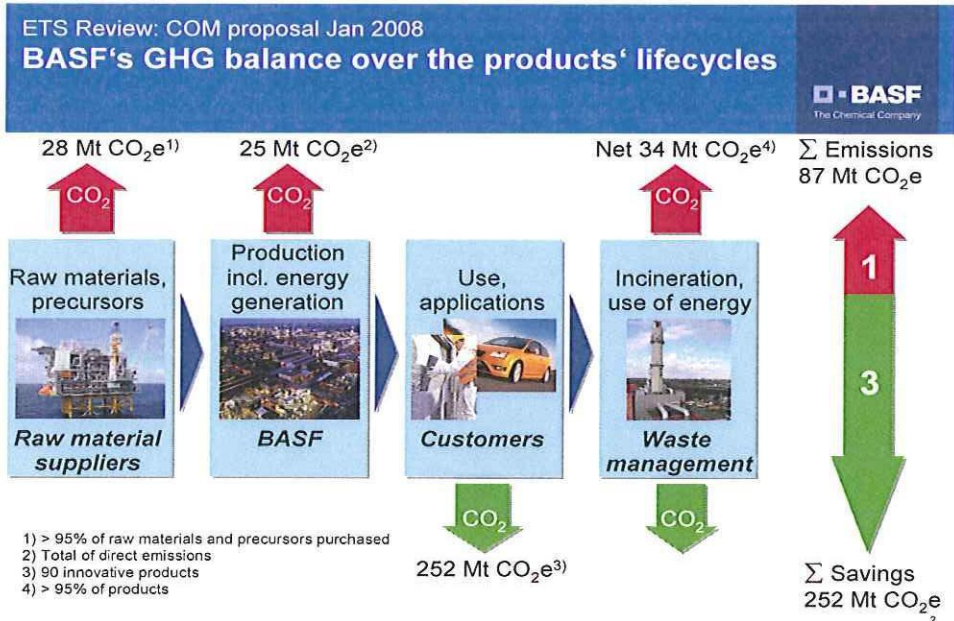
BASF is the world's leading chemical company: The Chemical Company. We are headquartered in Ludwigshafen, Germany. Our portfolio includes chemicals, plastics and performance products to agricultural products and fine chemicals, as well as oil and gas. As a reliable partner, BASF helps its customers in virtually all industries to be more successful. With our high-value products and intelligent solutions, BASF plays an important role in finding answers to global challenges such as climate protection, energy efficiency, nutrition and mobility. BASF has approximately 97,000 employees and operates 330 facilities on five continents. In the United States, we employ approximately 15,000 people and have facilities in more than half of the states.⁴

To underscore our commitment to sustainability, I invite the subcommittee's attention to the following:

- BASF has been successful in significantly reducing emissions of greenhouse gases through numerous measures in recent years. Since 1990 we have reduced our absolute GHG emissions by 38% and our specific GHG emissions per ton of sales product by 61%.
- We have developed a widely recognized *Verbund* system, where we link production plants intelligently to save resources and energy. For example heat from production processes is not discharged to the environment but instead captured to power other production plants. In 2008, our energy *Verbund* helped us to save 1.6 million metric tons of oil equivalents globally. We have six *Verbund* sites globally, with two in the United States.
- To supply our production sites with steam and electricity, we operate combined heat and power plants, which allows us to achieve an overall efficiency of almost 90%.
- BASF spends some €400 million per year in energy efficiency and climate related R&D.
- Globally our products save three times more CO₂ than is produced by the manufacture and disposal of all of these same products. When our customers use our products, it results in a decrease in 252 million tons of CO₂-e over their use phase. (See diagram below.) The results demonstrating the emission reduction reality of our products were confirmed by the Öko-Institut, a leading European research and consultancy institution working for a sustainable future.⁵

⁴ Further information on BASF is available on the Internet at www.basf.com.

⁵ Visit <http://www.oeko.de/home/dok/546.php>.



Returning to one of the points I made at the outset of my testimony about chemistry being a key to our sustainable future, part of the major GHG emission savings achieved by our customers through BASF materials take place in the following areas:

- housing with savings of 140 million tons of CO₂-e per year (e.g. through insulating materials);
- mobility with savings of 30 million tons of CO₂-e per year (e.g. through plastics that make cars lighter or fuel additives);
- industry with savings of 48 million tons of CO₂-e per year (e.g. through industrial catalysts, processes); and
- others with savings of additional 34 millions tons of CO₂-e per year.⁶

Moving forward, BASF has dedicated itself to reduce specific GHG emissions by 25% by 2020 compared with 2002 AND increase energy efficiency in production by 25% by 2020 compared with 2002.

The Impact of the European ETS

To begin a discussion on the European ETS and its impact on BASF, we should first note that Europe is required to take these steps in light of its adherence to

⁶ For more information on BASF products that increase energy efficiency and help to reduce GHGs, please see Testimony of Jack Armstrong, BASF Corporation, U.S. Senate Committee on Environment & Public Works, Business Opportunities and Climate Protection, May 2009, at http://epw.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=37159346-802a-23ad-4ea2-afa619aa8c43.

the Kyoto Protocol;⁷ that the system is being implemented in three stages; and no matter what safeguards are in place, until a global system is achieved, carbon leakage will remain an issue.

Stage I took place 2005-2007, was limited in scope, and was considered a learning phase and did not result in added costs for BASF. Stage II takes place from 2008-2012 and covers more installations.

Stage III will take place from 2013-2020, and negotiations among member states of the EU regarding this phase were concluded in December 2008. It is this stage that one may consider analogous to what is being considered here in the United States. The European system will rest on auctioning, as well as allocations of baseline credits based benchmarks.⁸

There is still work to be done in addressing a number of details regarding Stage III, and we cannot provide any concrete numbers. This is because the EU heads of state postponed and delegated quite important decisions to the so-called comitology procedure over the years 2009 until 2011. But, what we can draw from our rough calculations of the projected costs associated with this last stage and our experience with the first two stages is that for chemistry to grow, to prevent contractions, and continue to provide solutions to reducing GHGs, the industry must be listed as an exposed sector and qualify for 100% free baseline allocations. Baseline allocations based on benchmarks is the best way to help minimize carbon leakage for large and homogeneous products. Without these free baseline allocations, the price for BASF could be as high as €400 million per year.

Lessons Learned from the European Experience

The lessons that we have drawn from our experience with the European ETS are as follows:

(1) Carbon Leakage and Exposed Sectors - A measure for reducing GHGs must include an early and unambiguous statement that the chemical industry and

⁷ “The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions.” http://unfccc.int/kyoto_protocol/items/2830.php.

⁸ “Benchmarking” in the context of climate discussions refers to a process whereby, “Homogenous emitters are benchmarked, rated by an independent auditor. From that rating, a performance reference of CO₂ emissions per unit of production is derived. If a company wants to compete without additional costs, without then paying CO₂ rights, it has to manufacture its products according to processes meeting this performance reference.” European Chemical Industry Council, at <http://www.cefic.be/templates/shwNewsFull.asp?HID=1&NSID=704&NID=1>. Under the scheme approved in December 2008, the starting point for benchmarks in the European ETS shall be “the average performance of the 10% most efficient installations in a sector or sub-sector in the Community in the years 2007-2008. The European Commission shall consult the relevant stakeholders, including the sectors concerned.” European Commission, at http://ec.europa.eu/environment/climat/emission/benchmarking_en.htm.

other energy-intensive sectors qualify for continued free allocation of baseline allowances based on benchmarks. (Note: as explained earlier, the chemical industry has substantial potential to help the world reduce further emissions both through GHG emissions savings in its own production and through its products. If steps are taken to facilitate emissions reductions and fully utilize chemical products, the ratio of emissions savings to emissions could increase to more than '4 to 1' by 2030.⁹) The difficulty is defining an "exposed sector". Today's economy, and in particular the chemical industry, is extremely interlinked and complex. The methodology used in the European Union ETS directive to define exposed sectors¹⁰ has proven difficult to implement. Thankfully, the European Commission applied additional qualitative and quantitative analyses, which resulted in a preliminary finding that chemistry is an exposed sector, which would make it eligible for free baseline allowances.¹¹

(2) Electricity and Combined Heat and Power (CHP). Electricity production from industrial CHP installations should be subject to free allocations. Industrial energy uses should be free from CO₂ costs to avoid an unequal footing of electricity and heat-based industrial activities.

(3) Coverage. The designers of an ETS should clearly limit installation definitions to cover only the large emitters to keep the administrative burden and bureaucracy at an acceptable level.¹² The installation definitions under the European ETS are sometimes unclear, e.g., combustion vs. chemical installations.

(4) Benchmarks. While we support the benchmarking concept, the benchmarks set under the European directive are somewhat ambiguous. The legislative text to establish an ETS should be very specific with respect to benchmarks and the benchmarks should be simple, as opposed to defining hundreds of benchmarks for the many different heat uses. One benchmark should be defined for the production of heat. We also believe that benchmarks should be feedstock-specific in some cases to allow for a continued broad energy mix and increased security of supply. Otherwise the natural gas supply will suffer.

(5) Allocations – We have learned through our experience that the manner in which allocations are set out should be clearly stated in the legislation. This is not always the case in the European system. Because of this lack of clarity, it is

⁹ *Supra* note 2.

¹⁰ Exposed sectors have a high CO₂ cost share of gross value added and/or high trade intensities. Specifically, "the extent to which the sum of direct and indirect additional costs induced by the implementation of this directive would lead to a substantial increase of production cost, calculated as a proportion of the Gross Value Added, of at least 5%; and the Non-EU Trade intensity defined as the ratio between total of value of exports to non EU + value of imports from non-EU and the total market size for the Community (annual turnover plus total imports) is above 10%." European Commission, at http://ec.europa.eu/environment/climat/emission/carbon_en.htm.

¹¹ *Id.*

¹² More than 80% of chemical emissions are covered by less than 10 installation types.

likely that allocations will be *ex ante*, based on historic production in a given installation. This hampers growing companies and awards declining production. We suggest a regular adjustment of the production base.

(6) Border control measures, e.g., tariffs. We believe that the European Union has taken the correct approach by not implementing border control measures. First, we believe it likely that targeted countries would export their “clean” products and keep their “dirty” products for domestic use. Second, to comply with international law, they could be targeted to only against countries which have committed to GHG reductions under a post Kyoto agreement and do not live up to their commitments. Third, border mechanisms are unlikely to be compliant with standards established by the World Trade Organization and would lead to protectionism and retaliation measures.¹³ We note, for example, the existence of Article III of the General Agreement on Tariffs and Trade, which contains fundamental principle of non-discrimination, *i.e.*, the EU cannot discriminate against foreign products. The United States is also a member of WTO. Fourth, they would be almost ineffective for the chemical sector due to our huge range of (mostly upstream) products.

Conclusion

Thank you, Senator Shaheen and members of the subcommittee. BASF looks forward to sharing our expertise and experience in the area of climate protection. I would be pleased to answer your questions.

¹³ We are aware of the recent WTO/UNEP report titled “Trade and Climate Change,” which the press has said backs tariffs as part of a climate protection mechanism, at http://www.wto.int/english/res_e/booksp_e/trade_climate_change_e.pdf. However, the press’s interpretation and even the statements in the report are not held unilaterally, and there are differing views among academia, the business community, and even elected officials, including the president of the United States, which should be examined by this subcommittee.

CV of Dr. Wolfgang Weber

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1999 – 2006	Various Issue Manager Positions, VCI, Frankfurt and Berlin, Germany (German Chemical Industry Association e.V.) Energy Policy General governmental affairs, Berlin Office Issue Manager of the CDU/CSU Parliamentary Group in the German Parliament for the Enquete Committee „Globalization of the World Economy“ Science and Education Policy, Grants for Natural Sciences at Schools
1997 – 1999	Post-Doc, Computational Chemistry and Biology, University of California, San Diego, U.S.A
1997	Systems Analyst, SAP, Walldorf, Germany
1992 – 1996	Ph.D., Theoretical Chemistry, University of Zurich, Switzerland
1987 – 1992	Diploma and Studies of Chemistry, Universities of Frankfurt, Ger-many, and Cambridge, UK