Arguments and Positions

Raw Material Base of the Chemical Industry

The chemical industry in Germany uses a wide range of different raw materials: these include salts, metals and even air. Mineral oil is an important raw material: Organic chemical production builds on carbon compounds. The main raw material source for this is naphtha, a mineral oil derivative which accounts for 75 percent. To a minor extent, there are also renewables from biomass (about 13 percent) and natural gas (11 percent).

Alternative carbon sources

Sustainability and resource efficiency are important guidance criteria of the chemical industry in the choice of suitable raw materials. In order to widen the raw material base not only natural gas but, most importantly, also renewables are the obvious choice in organic chemistry. Already now, renewables are used where they bring technical and economic advantages. However, intensive research and development work still needs to be done to open up new fields of application.

Within sector coupling (use of renewable electricity in other sectors), also the use of CO₂ as a carbon source is moving into focus. The hydrogen needed for this use of CO₂ could be obtained through electrolysis with renewable electricity.

CO₂ and renewable raw materials can have a major role for a circular economy. The chemical industry can use them as carbon sources and thus contribute to closing the carbon loop.

Unimpaired access to raw materials is needed

The chemical industry depends on a free trade in raw material markets. But politically motivated restrictions are increasingly impairing market access: Such restrictions include tariffs and export quotas as well as different prices for domestic consumption and exports (so-called dual pricing).

Resource efficiency is a key topic

For economic reasons, resource efficiency is in the very interest of companies, as they process raw materials highly efficiently: The chemical industry has consistently expanded its integrated structures (“Verbund”) and is continually optimising its production processes. Wastes are avoided or recovered, wherever possible. Furthermore, in the years to come the industry is going to increasingly invest in digitalisation projects and sustainable business models.

Yet more innovation leaps can be expected in this era “Chemistry 4.0” - with impulses for a circular management style and even higher resource efficiency. By contrast, regulatory requirements and instruments are barely suitable for improving resource efficiency. Moreover, they can be harmful to the competitiveness of companies.

THE VCI IS CALLING FOR THE FOLLOWING

Ensure well-balanced raw material supplies

The German chemical industry needs reliable and competitive supplies of raw materials. Only then can the chemical industry continue in its role as a supplier of resource-efficient technologies and products. For this reason, there should be no state interventions with instruments such as quotas or taxation, which are intended to bring about by force a circular economy (recycling) or the use of renewables.

Strengthen research and development

Innovations are the tools for change in the raw material base and for increasing resource efficiency. Therefore, the state should strengthen research and development. This includes the basic research of universities and institutes as well as the research and development of companies in new processes, technologies and products, which should continue to be supported by sufficiently funded project funding to science and businesses.