

The transition to a less carbon-intensive society: A pivotal role for the chemical industry

There is broad consensus that Europe and the rest of the world must start making the transition to a less carbon-intensive future to combat climate change. This requires innovation and technology on a massive scale, with the chemical industry playing a pivotal role.

Many existing solutions rely on chemistry to deliver CO₂ savings. Greater use of insulation materials, low-energy lighting products, and lightweight materials for packaging and automotive applications can have a massive impact on reducing carbon emissions throughout their use. Life-cycle analysis show that, in many instances, the carbon gains outweigh the emissions required for their extraction, manufacture and disposal.

The chemical industry is continuing to drive innovation for future reductions in CO₂ emissions.

“Responsible use of natural resources and a level playing field for sourcing energy and feedstock are success factors for competitiveness and sustainability.”

Conclusion of the High Level Group on the Competitiveness of the European Chemicals Industry.

New products and processes

Current development efforts include conductive polymers for electronic chips, reverse osmosis membranes for water desalination and organic photovoltaic materials. Also included is greater use of renewable feedstock in various production processes such as the use of sugar cane to manufacture ethylene and polyethylene.

In addition to the above, the European chemical industry has made strides in reducing production-related greenhouse-gas emissions. The industry has cut its energy intensity by 3.6% annually and reduced greenhouse-gas emissions by 30% since 1990.

As a result, European chemical producers are among the least carbon-intensive in the world. Although the chemical industry is a major energy consumer, its overall contribution to climate change is positive.

Defending competitiveness

This positive role in curbing our carbon dependence will continue to grow through innovation-driven efficiency gains and the development of new products and materials.

Bringing this message to European audiences and policy makers is one of the main tasks of Cefic, as the required innovation hinges on defending the industry's global competitiveness.

The review of the EU's Emissions Trading System (ETS) for the third trading period of 2013 – 2020 is high on Cefic's agenda. The European Commission published its ETS revision proposal in January 2008 and current discussions will shape the design and scope of ETS after 2012.