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## Circular Economy

Petrochemicals Europe welcomes the EU Commission's circular economy concept as an integral part of its strong and ongoing commitment to sustainability, health and environmental protection. A circular economy can be described as an economy that provides multiple value creation mechanisms which are decoupled from the consumption of finite sources.<sup>1</sup>

The petrochemical industry in Europe already has a proven track record of embracing the essence of the concept (preserve and enhance natural capital, optimize resource yields and foster system effectiveness) as an essential pillar of its business models - not as a consequence of regulatory pressure, but as an opportunity to optimize operations. Managing cost is key to competing in global markets. This driver, coupled with the environmental benefits of the circular economy, explains why petrochemical producers in Europe see such opportunity in these efficiency steps.

Some examples:

- Closed water loops, i.e. after being used the same water is purified and re-used
- Integrated sites ("Verbund") with local optimization of side streams, i.e. the by-products of one production process are used for the production of other substances on the same site or in neighboring plants
- Pipelines as safe, zero-emission transport system between plants, sites or even whole chemical clusters
- Recycling and reuse of CO<sub>2</sub>, heat and steam

Apart from the petrochemical industry's own contribution to circular economy petrochemicals also act as enablers for the circular economy driving resource efficiency of downstream user industries as well as other consumers, for example by providing the essential building blocks for reducing waste (via ultra-thin packaging material like foils), increasing energy efficiency (for example via insulation material), reducing emissions (via renewable energy devices like solar panels and windmill blades) and fuel consumption (via additives), or enhancing the convenience of every-day products (for example light-weight plastics instead of heavy components).

Moreover, maintaining the highest levels of health and safety standards, as well as environmental protection, are an absolute priority for all petrochemical producers in Europe; substantial investments are

<sup>1</sup> Ellen McArthur Foundation

continuously dedicated to make all sites environmentally sound and safe. It is certainly not exaggerated to state that petrochemical producers in Europe are leaders in the implementation of the most ambitious health, safety and environmental standards world-wide.

Petrochemicals Europe is looking forward to the European Union creating the favorable business environment needed to trigger (even) more innovation in this area and act as a facilitator for the circular economy rather than as a mere regulator.

*In this context our industry's request would be to integrate in the current concept aspects like Life Cycle Analyses and the Safety-First principle, based upon sound science and an appropriate cost-benefit ratio.*

## Petrochemicals vision of circular economy

