

## ROLE OF THE CIRCULAR ECONOMY IN INDUSTRY DECARBONISATION

Hague B., Zedníček P., Rulík T.

*Institut Cirkulární Ekonomiky (INCIEN), Prague, Czech Republic*

EU and national government policy, financial support programmes and industry initiatives related to industry decarbonisation have to date focused principally on energy efficiency, the shift to renewable energy sources (for decarbonised electricity), the development of hydrogen infrastructure (to replace natural gas) and the deployment of breakthrough process technologies such as Carbon Capture, Use and Storage (CCUS). Despite a growing body of international research, the role of the circular economy, including material efficiency, in industry decarbonisation is still less well understood and is underrepresented in current plans for energy intensive industries. Scenarios developed by international think tanks, institutes, and industry associations, as well as bodies such as the International Energy Agency, the International Resource Panel and the World Economic Forum, indicate that circular economy actions could deliver between 40 and 65% of the total CO<sub>2</sub> savings required to reach net zero emissions from the combined production of steel, cement, plastics and aluminium in the EU, covering both supply-side (production) and demand-side (consumption) measures, especially in downstream sectors such as buildings construction and the automotive industry. These actions cover three main circular strategies: materials recirculation or substitution; material efficiency; and circular business models (such as product lifetime extension, sharing and “product as a service”). This presentation will cover highlights from a [new study by INCIEN](#), which provides a synthesis of international research to date on this topic, including key circular decarbonisation levers by sector, the potential for CO<sub>2</sub> emissions reduction, implications for Czech industry, general policy recommendations and priority areas for further analysis at a national and regional level.