

# Decarbonization Pathways for Steel and Cement Industries – The Role and Potential of CCUS

## Steel and cement emit the most industrial carbon dioxide

### Ubiquitous and useful products

- Cement is the second-most-consumed product globally after drinking water.
- The steel industry is at the heart of global development and closely tied to economic growth.

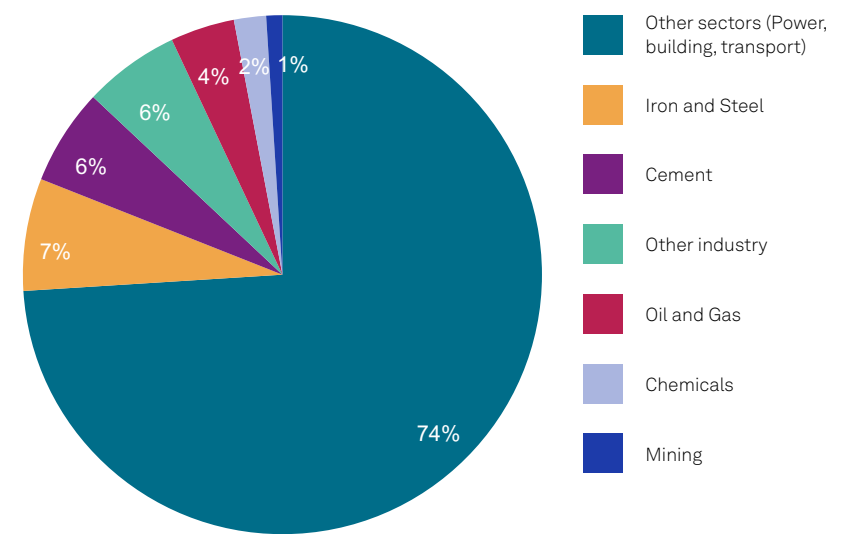
### High emission industries

Iron and steel production is a carbon intensive industry responsible for about 7% of global greenhouse gas (GHG) emissions, while cement contributes another 6%.

### Impact on air quality

These industries are responsible for NOx and volatile organic compound (VOC) emissions and the subsequent smog risk.

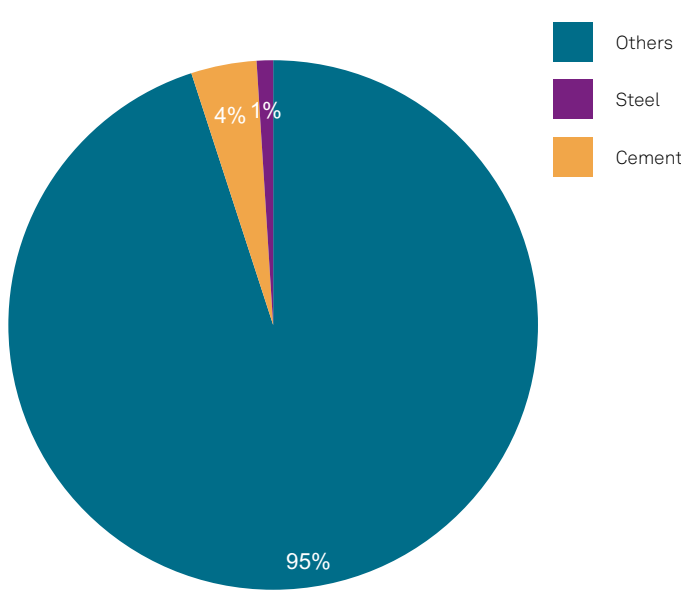
Breakdown of global CO2 emissions (2019)



Source: IHS Markit, International Energy Agency (IEA), McKinsey © 2022 IHS Markit

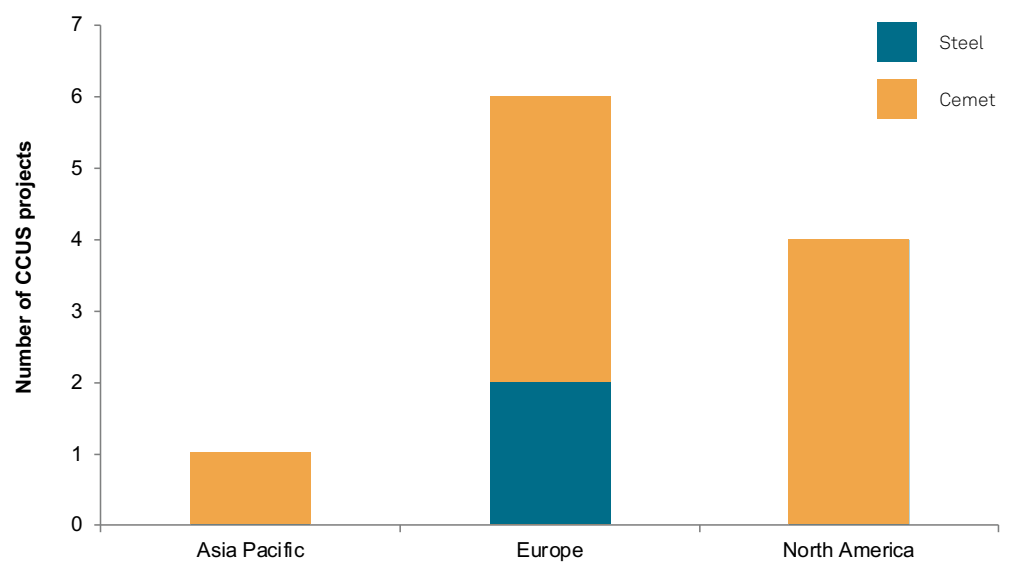
## Multiple cement and steel producers are engaged in low-carbon projects accounting for 5% of current CCUS pipeline of projects mainly in Europe

Pipeline of large-scale CCUS projects by capture capacity



Note: Others include power generation, natural gas processing, hydrogen production, ethanol production, waster processing.  
Source: IHS Markit © 2022 IHS Markit

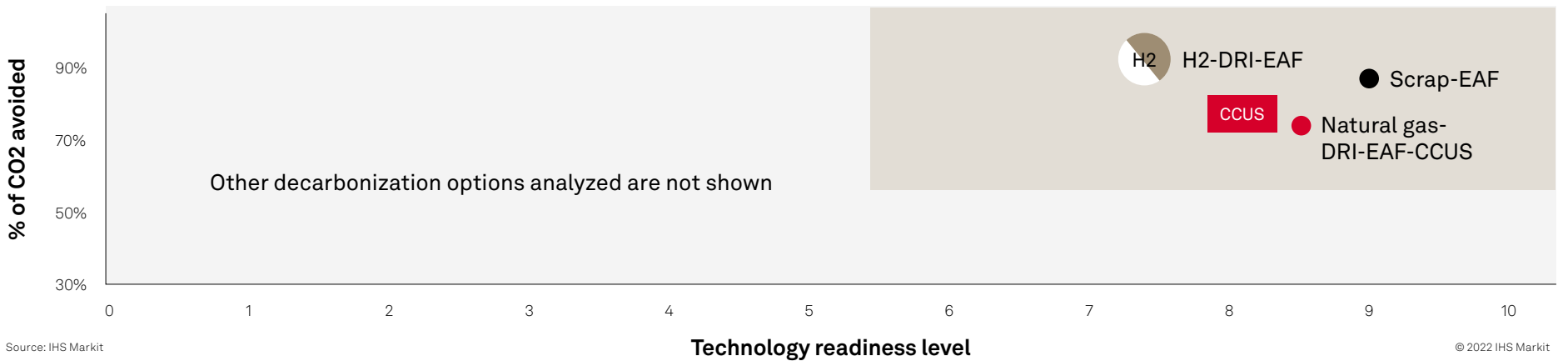
Steel and cement related CCUS large-scale project by region



Note: Includes only projects in the pipeline  
Source: IHS Markit © 2022 IHS Markit

## Many deep decarbonization options exist at different stages of development for both the steel and cement industry

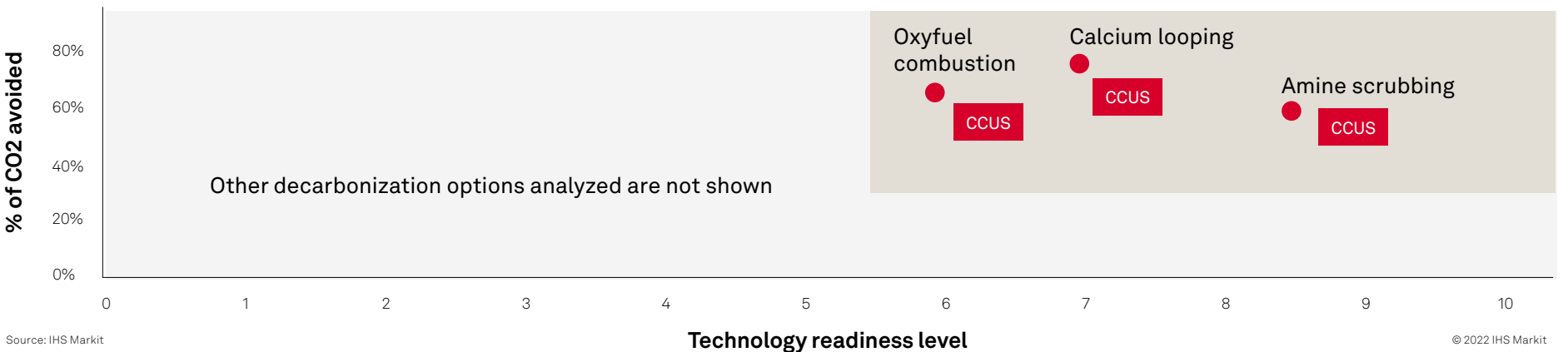
Major decarbonization options for the steel industry



Source: IHS Markit

© 2022 IHS Markit

Major decarbonization options for the cement industry



Source: IHS Markit

© 2022 IHS Markit

Options with % of CO2 avoided above 70% and technology readiness between 6-10

## Webinar: Is CCUS the Best Solution to Decarbonize the Steel and Cement Industries?

Discover the major opportunities and long-term challenges for this technology in these sectors. Available to watch on-demand.

[WATCH NOW >](#)

