

Industrial clusters for deep decarbonization

November 18 2022



Credit: Frank Geels

Perhaps no sector of the global economy is in greater need of concerted efforts toward deep decarbonization than industry, which includes energy-intensive sectors such as chemicals, iron and steel, cement, and aluminum.

Yet industry has long been perceived as hard to decarbonize and has been mostly sheltered from strong energy and [climate policies](#) over

concerns about potential job losses, national competitiveness, and carbon leakage.

Professor Frank Geels has published a new article in *Science* alongside co-authors Benjamin Sovacool and Marfurga Iskandarova titled "Industrial clusters for deep decarbonization: Net-zero megaprojects in the UK offer promise and lessons."

Industrial decarbonization scenarios often identify [carbon capture](#) and storage (CCS) and fuel switching to hydrogen as potential net-zero options, but these technologies are expensive for individual companies and specific industries.

These options can become more feasible when implemented in industrial clusters, where plants from [different industries](#) operate in [close proximity](#). We see promise and lessons in recent advancements in the coevolution of net-zero cluster planning, policy implementation, and technical development in the U.K., where world-leading plans and designs have progressed close to the implementation stage.

More information: Benjamin K. Sovacool et al, Industrial clusters for deep decarbonization, *Science* (2022). [DOI: 10.1126/science.add0402](https://doi.org/10.1126/science.add0402)

Provided by University of Manchester

Citation: Industrial clusters for deep decarbonization (2022, November 18) retrieved 27 April 2024 from <https://techxplore.com/news/2022-11-industrial-clusters-deep-decarbonization.html>

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