

Liftoff Opportunities Snapshot: Industrial Decarbonization

The emissions from eight industrial sectors—chemicals, refining, iron & steel, food & beverage processing, pulp & paper, cement, aluminum, and glass—accounted for 14% of U.S. emissions in 2021.

By 2030, **up to 40%** of emissions across these eight sectors can be abated through the implementation of industrial decarbonization levers.

This pathway to reach net zero by 2050 could require **at least \$700 - \$1,100 billion of capital expenditure.**

These carbon-intensive industrial sectors are facing a critical inflection point due to:

Congressional support from the Bipartisan Infrastructure Law and the Inflation Reduction Act

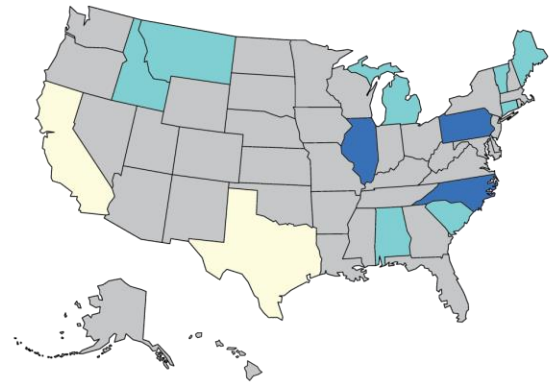
Customers and other stakeholders increasingly expect companies to address climate change.

Some companies making bold decarbonization moves.

Specialization in Alternative Electric Power Subcluster by State, 2021

- High Employment Specialization and Share
- High Employment Specialization
- High Employment Share

Source: <https://clustermapping.us/>



This Pathway to Liftoff scenario relies on technologies along the Research, Deployment, Demonstration, and Deployment (RDD&D) continuum with near-term opportunities for deployable technologies across all sectors studied.

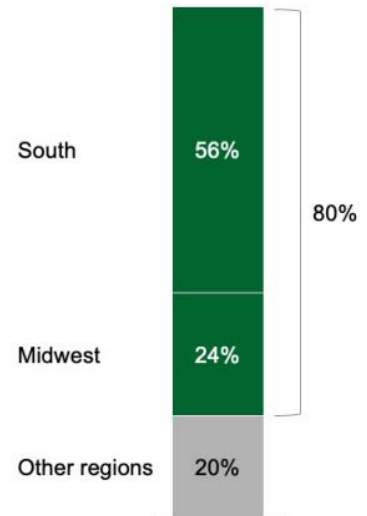
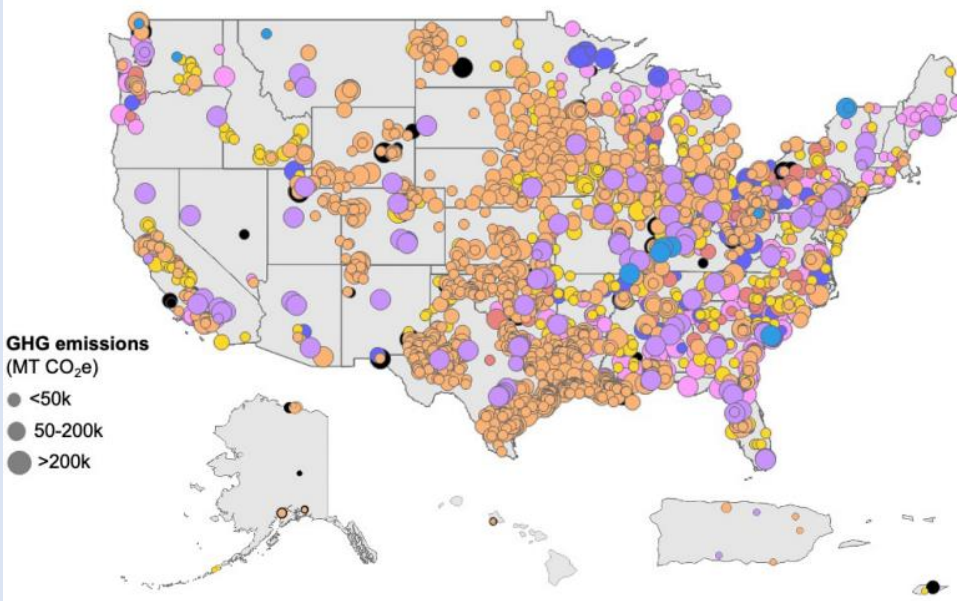
In the United States, CO₂e emissions come from 2,500+ facilities, with the South and Midwest representing 80% of the emissions.

ILLUSTRATIVE NOT EXHAUSTIVE

Sectors ■ Cement ■ Chemicals ■ Pulp & Paper ■ Refining ■ Aluminum ■ Iron & Steel ■ Glass ■ Food & Beverage

Map of select U.S. point source CO₂ emissions by sector, 2021²

Share of U.S. industrial emissions for sectors in IRA, %, 100% = 876 MT of U.S. 2021 CO₂e emissions³



South & Midwest regions¹ represent ~80% of U.S. point source emissions

The information in this flyer is based on the [Pathways to Commercial Liftoff: Industrial Decarbonization](#) report.