

The U.S. Carbon Advantage in Chemicals Manufacturing

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The United States chemicals manufacturing industry has a distinct carbon efficiency advantage over other major producing countries, meaning we generate less carbon emissions to produce the same things. Despite the U.S. carbon advantage and increasing recognition of the need to lower global emissions, there are currently no trade policies in place to reward more carbon efficient manufacturing, hold less efficient producers accountable, or establish global market incentives that benefit innovative, lower-carbon firms.

U.S. policymakers have a unique opportunity to leverage their existing carbon advantage in the chemicals manufacturing sector. With changes to international trade rules, U.S. chemicals producers could improve their competitive position, mobilize emissions reductions that are already available, and lower global emissions.

Leveraging our carbon advantage will...

- 1 Benefit U.S. workers and manufacturers
- 2 Lower global emissions
- 3 Incentivize everyone to compete to lower emissions

The global chemicals manufacturing industry produces a vast range of essential products – including many that are useful for decarbonization – and supports 4.1 million jobs in the U.S. But at the same time, the industry is the third largest source of industrial carbon emissions. To meet our climate goals, it will need to rapidly improve its carbon efficiency. Given that U.S. producers are already 10–40% more carbon efficient than the global average, we have everything to gain by staking out a leadership position in establishing climate and trade policies.

America's Carbon Efficiency Advantage in Bulk Chemicals Manufacturing vs. Global Top Producers

The Council studied the carbon intensity of manufacturing five major bulk chemicals (benzene, toluene, ammonia, polyethylene, and polypropylene), which are used in products ranging from fertilizer to diapers, bulletproof vests, and building insulation.

Relative Carbon Intensities to Manufacture Bulk Chemicals

Major Chemical Manufacturing Regions

	USA	China	EU	Saudi Arabia	World
Benzene	1.0	1.4	1.5	1.3	1.3
Toluene	1.0	1.2	1.2	1.1	1.1
Ammonia	1.0	2.1	1.0	0.9*	1.3
Polyethylene	1.0	1.8	0.8	1.1	1.1
Polypropylene	1.0	2.9	1.0	1.4	1.6

*Not a major producer of ammonia

U.S. = 1.0

	U.S. Carbon Advantage (foreign competitors less carbon efficient)
	U.S. Carbon Disadvantage (foreign competitors more carbon efficient)
	U.S. Carbon Efficiency or Equivalent

This report is the latest in a series of analyses examining American industry's relative carbon efficiency advantage compared to the rest of the world. Our research shows that goods manufactured in the U.S. produce 40% fewer carbon emissions than the world average. Read our **America's Carbon Advantage** report to learn more.

