

# AMERICA'S CARBON ADVANTAGE 2025

The United States maintains a strong carbon efficiency advantage. This means that in most sectors across the economy, American firms produce the same or similar goods as their competitors with fewer emissions. Goods manufactured in the U.S. are more than 2X more carbon-efficient than the world average and about 4X more carbon-efficient than those manufactured in China.

The Climate Leadership Council pioneered research in this area with the publication of "America's Carbon Advantage" in 2020. Our latest work uses updated data to re-confirm findings on the U.S. carbon advantage while providing a closer look at the underlying reasons for it: fundamental differences in energy and industrial practices across major economies.

Differences in the carbon efficiency of production around the world demonstrate that—particularly for energy-intensive industries—**where something is made matters**. Which countries dominate production and supply the global market can have a significant impact on global emissions.

## KEY FINDINGS OF THIS ANALYSIS INCLUDE:

2x

The U.S. maintains a carbon advantage over major economies. The U.S. is more than 2X more carbon-efficient than the world average.



The U.S. carbon advantage is driven by fundamental differences in energy efficiency, electricity mix, and direct industrial energy use.



The U.S. has improved its carbon efficiency dramatically over the last two decades in comparison to other major economies.

4x

The second largest manufacturer in the world (U.S.) is about 4x more carbon-efficient than largest (China).



Emerging and developing economies are growing rapidly with a continued reliance on high-emitting energy sources.



This advantage will persist in the years and decades ahead, so long as U.S. manufacturers maintain their commitment to innovation and global leadership.

**Table 1: America’s carbon efficiency advantage by industrial sector vs. BRIC, EU, & USMCA Countries**

	U.S.	Brazil	Canada	China	EU	India	Mexico	Russia	World
Mining and quarrying, energy producing products	1.0	1.2	2.2	1.9	1.5	1.7	1.0	1.6	1.2
Mining and quarrying, non-energy producing products	1.0	0.9	1.2	3.8	1.3	2.3	1.2	0.7	2.2
Mining support service activities	1.0	1.4	2.9	5.7	3.1	2.0	1.8	7.3	3.4
Wood and products of wood and cork	1.0	1.3	2.1	1.6	0.9	1.3	1.8	3.0	1.4
Paper products and printing	1.0	1.8	4.2	2.2	1.0	3.6	1.0	3.3	1.7
Coke and refined petroleum products	1.0	1.2	1.6	1.5	1.1	1.7	0.9	1.7	1.2
Chemical and chemical products	1.0	1.3	1.5	2.4	0.9	1.6	1.0	5.3	1.8
Pharmaceuticals, medicinal chemical and botanical products	1.0	3.7	3.1	6.6	2.0	6.9	8.5	7.3	3.7
Rubber and plastics products	1.0	1.9	1.2	2.7	1.0	2.7	1.5	4.6	1.9
Other non-metallic mineral products	1.0	2.2	1.2	2.1	1.3	3.8	0.9	3.8	2.0
Basic metals	1.0	2.2	1.3	2.7	1.2	3.5	1.3	5.0	2.3
Fabricated metal products	1.0	2.0	1.2	4.0	1.0	3.9	1.9	5.1	2.4
Computer, electronic and optical equipment	1.0	3.7	2.6	7.1	2.7	17.6	4.4	8.5	5.3
Electrical equipment	1.0	2.2	1.4	3.8	1.2	6.7	1.9	6.2	2.8
Machinery and equipment, nec	1.0	1.8	1.2	3.7	1.0	6.2	1.5	5.7	2.4
Motor vehicles, trailers and semi-trailers	1.0	1.8	1.1	2.6	1.0	5.5	1.4	3.2	1.7
Other transport equipment	1.0	2.0	1.3	5.3	1.3	6.2	2.0	7.1	2.7
Manufacturing nec; repair and installation of machinery and equipment	1.0	1.3	1.3	2.6	0.7	2.9	1.4	3.9	1.6
<b>Economy-Wide</b>	<b>1.0</b>	<b>2.3</b>	<b>1.5</b>	<b>3.6</b>	<b>1.0</b>	<b>4.4</b>	<b>1.7</b>	<b>5.4</b>	<b>2.2</b>

Source: Phylleos and author calculations based on data from the OECD.

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

