California's next step on climate change: Buy clean

alifornia has long been recognized as a global leader in addressing climate change, and rightly so. Our aggressive policies supporting clean energy, energy efficiency and greenhouse gas limits are showing the world that a thriving economy can also be a climate-safe economy.

But there's a catch.
While California's businesses, industries and residents are doing everything possible to reduce greenhouse gas emissions, the same is not true in many places that make the products we regularly purchase.



BY STEVEN J. DAVIS Special to The Bee

Studies show that almost 25 percent of worldwide carbon emissions that cause climate change are embodied in products that are made in one country, but sold and used in another. California's demand for imported goods is no exception. Whether it's other states that lack their

own carbon limits, or other nations that haven't caught up, many of our purchases hide a portion of our pollution.

This is not a knock on all international trade. Trade has been a boon to the California economy, creating jobs and investment opportunities and opening markets for major companies, including Apple, Google and Oualcomm. The state's leadership on climate has also helped open international business opportunities for our world-leading companies in solar, wind, energy storage and transporta-

But abundant evidence

shows that our purchases and related trade patterns will, in many cases, determine the effectiveness of energy and climate policies. So far, the data doesn't look good: We are most certainly spurring carbon emissions outside California via the goods we buy.

Understanding the quantity and point of origin of the carbon embodied in a product is the key to getting this right. The concept is fairly simple: Making a product requires energy, so the energy source used determines its embodied carbon. For example, if you make a ton of steel in a

polluting, inefficient mill, its embodied carbon will be higher than if it were made in a modern, superefficient mill.

How big a difference does this make? According to research done by the Lawrence Berkeley National Lab, the best steel furnaces emit a little more than a ton of carbon dioxide per ton of steel, while the dirtiest factories emit more than twice that amount.

That's a huge difference. In California, we buy a lot of steel – for highways, buildings, bridges, trains, tunnels and related infrastructure. Choosing to buy only the cleanest steel could cut the related carbon emissions by half.

Thankfully, we know how to do this. The state of California has the ability to focus the substantial purchasing power of its \$170 billion budget on products that meet our climate standards. California companies could do the same thing with their suppliers, and help spread low-carbon, climatefriendly practices up the supply chain.

The principle we should adhere to is, "Buy clean."

California's voters have decided, time and again, that climate change is an urgent problem we can address. California could choose to put its money where its mouth is and close this carbon loophole. Doing so would tell the rest of the world once again that, when it comes to climate change, California means business.

Steven J. Davis is an associate professor of Earth systems science at the University of California, Irvine. He can be contacted at sidavis@uci.edu.