

Carnegie Mellon researchers call for reducing carbon emissions

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Carnegie Mellon University engineering researchers Christopher L. Weber and Scott H. Matthews argue that rising U.S. trade with countries like China has major consequences for the future of global climate policy. In a June 2007 research paper published in the journal *Environmental Science and Technology*, the Carnegie Mellon researchers describe how the U.S. has reduced its increasing carbon emissions by importing more carbon-intensive goods from other countries.

For example, the amount of carbon dioxide (CO_2) emissions generated from making a desktop computer in China could be up to three times higher than when the same desktop computer is made in the U.S., according to the Carnegie Mellon study. In total, the authors estimate that CO_2 emissions associated with imports rose from 12 percent of total U.S. emissions in 1997 to 22 percent in 2004, a substantial increase given that the U.S. already emits around 25 percent of the world's total global carbon dioxide.

"These emissions are only going to increase as the United States continues to consume more and more essential goods from outside its borders," said Matthews, an associate professor in the departments of civil and environmental engineering and engineering and public policy. And because the U.S. continues to import more goods from carbonintensive trading partners, the researchers conclude this trend is likely to continue in the short term, without major efforts toward efficiency gains and cleaner development in the emerging industrial economies. Weber and Matthews urge the U.S. and other developed countries to agree to



further reduction of greenhouse gases.

Last week, the U.S. did remove a major obstacle to an international agreement when President Bush reversed a longstanding policy and called on the world's largest greenhouse gas emitters, including China and India, to discuss future reductions in greenhouse gas emissions. President Bush has long held the view that emerging economies, such as China and India, should join the developed economies in requiring emission reductions.

"Complicating the problem is the need to temper how we deal with emerging countries," said Matthews. "To ask the developing countries to lower emissions too early, too abruptly will hinder their development and hamper their efforts to achieve industrialization and modernization."

As global trade continues to expand, issues of trade and emissions will continue to grow in importance. Many researchers have questioned how emissions associated with traded goods should be accounted for.

"The central question is one of responsibility," said Weber, a graduate researcher in the departments of civil and environmental engineering and engineering and public policy. "Over the last decade, the United States' share of global carbon emissions has gone down and China's has gone up. However, if you count not by who makes the goods, but by who consumes the goods, the United States' share of responsibility has stayed constant or even gone up. However, these emissions are not counted because they've been outsourced to other countries."

Source: Carnegie Mellon University



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