Competitiveness Issues with a Carbon Tax

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If the United States adopts a carbon tax, what, if anything, should be done to protect export industries? Drawing on a recent paper written with co-author Wayne Gray, Tufts professor Gilbert Metcalf discussed the possibility of using tax credits to support firms in energy intensive trade exposed (EITE) sectors, to help them maintain their export competitiveness.

From a purely economic point of view, Metcalf acknowledged, the problem itself is small, arguably, even, a "non-problem," especially given that the United States' most important trading partners (Canada, the European Union, China, and Brazil) are themselves adopting measures to reduce greenhouse gas emissions. Nonetheless, the potential for loss of industrial competitiveness (and of jobs in affected industries) represents a significant "political problem" for a carbon tax, Metcalf noted, warranting an examination of how public policy could best address competitiveness concerns.

Metcalf focused on the idea of implementing output-based tax credits (OTCs) for the industries most affected by a carbon tax. A system of OTCs, Metcalf explained, could represent a "best-practices design," because it would maintain the intended emissions reduction incentive provided by a carbon tax, even as it supported the ability of companies to continue to offer competitive prices for their exports. Companies would receive tax credits based on the amount of goods produced. The credit would be based, not on the actual amount of carbon tax paid by an individual plant, but on an amount benchmarked to the industry as a whole—so an individual plant would still have the full carbon tax incentive to reduce emissions under this system. The amount of credit offered would be a policy decision, which could be benchmarked to average emissions in an industry. Policymakers could choose to give credits equal to the average amount of carbon tax paid, or, more stringently, equal to the amount of carbon tax paid by the lowest-emitting factories.

Metcalf and his co-author had modeled the likely impacts of an output-based tax credit in a scenario with a $20 per ton carbon tax, assuming the credit was limited to the thirty or so sectors with the highest combination of energy intensity and trade intensity (industries producing things like iron & steel, cement, and nitrogen fertilizer). The cost of the credit would depend on the cut-off policymakers chose to adopt. Depending on the choice made, credits might absorb somewhere between 35% and 86% of carbon tax revenues collected from the affected industries.

As a way to keep energy intensive exporters competitive, however, Metcalf noted that the OTC policy's potential impact may be significantly limited by the fact that many of the sectors that would be impacted do not pay enough in taxes to use all of the tax credits that might be allocated to them. Depending on how many tax credits were awarded, somewhere between 39.3% and 42.6% might be unusable, unless a (likely politically difficult) policy were adopted to make the tax credits refundable, or to allow tax credits to be traded.

Metcalf spoke as part of the Kennedy School's Energy Policy Seminar Series, which is sponsored by the Consortium for Energy Policy Research of the Mossavar-Rahmani Center on Business and Government.