

# Addressing Competitiveness Issues in Climate Legislation

Energy-intensive industries may face certain competitiveness concerns resulting from a program to reduce U.S. greenhouse gas (GHG) emissions. Industries such as aluminum, cement, iron and steel, pulp, paper, and certain chemicals -- as large energy users -- all have high energy costs and sell their products in a global marketplace. Domestic producers of these goods could face higher costs than their competitors in countries without comparable GHG constraints. The American Clean Energy Security (ACES) Act, which recently passed the U.S. House of Representatives, attempts to address these competitiveness concerns by compensating energy-intensive, trade-exposed firms for higher costs by providing them with free allowances and through the use of border tax adjustments.

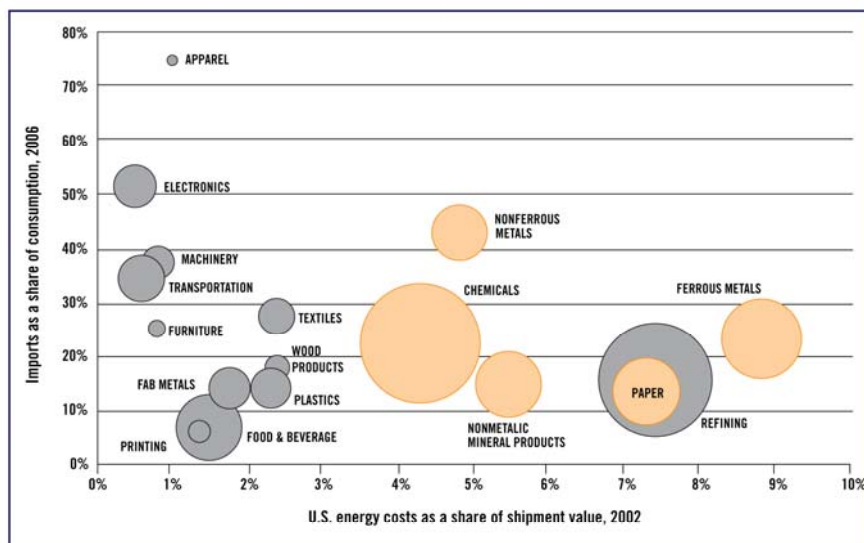
## What are the Concerns?

Industries that use a large amount of energy in production face higher costs in a carbon-constrained world. If other countries do not place similar restrictions on GHG emissions, these industries could be at a competitive disadvantage in the world market, risking the loss of U.S. manufacturing jobs. This movement of jobs and production to other countries also would undermine the goal of reducing emissions, since these emissions would shift to other parts of the world (a problem called "carbon leakage"). Figure 1 shows the exposure of U.S. industries to potential competitiveness impacts. A recent Pew Center analysis<sup>1</sup> projected that most energy-intensive sectors face only a modest competitiveness impact – losing on average 1% of production to imports – at a CO<sub>2</sub> price of \$15 a ton (EPA estimates the CO<sub>2</sub> price in 2015 is \$13 under the ACES Act).

## What are the Policy Options?

In the long term, competitiveness concerns are best addressed through international agreements ensuring that all major economies contribute their fair share to the global climate effort. In the interim, until an effective global agreement is in place, a number of transitional policy options are available at the domestic level. One option is to exempt firms from coverage under the GHG reduction program. Another is to include these firms but compensate them for the extra costs, both direct (price of emissions permits) and indirect (higher electricity and natural gas prices). Key design considerations include the scope, form, and means of calculating such compensation, and whether and how to phase it out over time. Another option is to provide transition assistance to vulnerable firms to help them move toward lower-GHG technologies, and to communities and workers affected by competitiveness issues. Finally, border adjustments such as taxes on imports of a given sector from countries without GHG restrictions could be used to equalize costs between U.S. firms and their foreign competitors.

Figure 1 U.S. Industry Exposure to Climate-Related Costs



This figure indicates the potential exposure of some U.S. industries to climate-related costs on the basis of their energy intensity (energy costs as share of shipment value) and their trade exposure (imports as share of consumption). The size of the bubbles indicates the industries' total CO<sub>2</sub> emissions in 2002. The industries represented by colored bubbles are those generally regarded as vulnerable to potential competitiveness impacts. (Refining, although energy-intensive, has not figured prominently in the competitiveness debate; trade-related impacts, if any, would likely be far outweighed by the effects of reduced consumption.)

Source: Houser, Trevor et al., *Leveling the Carbon Playing Field: International Competition and US Climate Policy Design*, Peterson Institute for International Economics and World Resources Institute, May 2008.



### How Does the ACES Act Handle Competitiveness Concerns?

The ACES Act levels the playing field through rebates, provided in the form of free emission allowances, and the border tax adjustment, which provides a backstop against any uncompensated costs caused by other countries failing to act.

**How are the Rebates Calculated?** Emission allowance rebates compensate qualifying entities for higher costs while still providing incentives for these entities to become more efficient over time. Rebates are output-based, meaning they are calculated based on the average product output of the qualifying entity. For direct costs, entities receive allowances based on their average output multiplied by the average direct GHG emissions per unit of output for all covered facilities in their particular industrial sector. Similarly, for indirect costs, entities receive allowances based on their average output, the emissions intensity of their electricity supplier, and their sector's average electricity use per unit of output. Under this formula, entities that are more efficient than their industry's average receive additional allowance rebate value beyond what is needed to cover their direct and indirect costs. Sector averages for both emissions and electricity use per unit of output are recalculated periodically, and these averages can never be higher than they were in a previous calculation, helping ensure these sectors become more efficient over time.

For 2014-2015, 15 percent of total allowance value is set aside to fund the rebates; from 2016-2025, the rebates receive 13.4 percent of allowance value. Starting in 2026, the rebate declines by 10 percent per year until 2035 when it is phased out entirely, unless the President makes a determination that this would result in severe economic harm to the eligible industries.

**How is the Border Tax Adjustment Implemented?** Beginning in 2020, imports of energy-intensive, trade-exposed goods *may* require the submission of emissions allowances (called international reserve allowances). This requirement would take effect if there is no internationally binding agreement by 2018 or if countries have not demonstrated comparable climate action in a sector that is covered under the U.S. GHG reduction program. This represents a form of border tax, as it raises the cost of imported goods to a level similar to that of their domestically produced counterparts. This provision is set to take effect automatically in all eligible sectors, unless the President determines that the adjustment is not necessary for a given sector and Congress agrees. It would also not take effect in a given sector if at least 85 percent of the sector's imports come from countries meeting one or more of the following criteria: 1) the country is party to an international treaty and has agreed to emissions reductions at least as stringent as those in the United States; 2) the country is party to an international sectoral agreement to which the U.S. is a party; or 3) the country has an energy or GHG intensity in that sector no higher than that those in the U.S. The border tax also does not apply to imports from Least Developed Countries or nations that account for less than 0.5 percent of global GHG emissions and less than 5 percent of U.S. imports in a particular sector.

Concerns over competitiveness are best addressed through effective international agreements, but transitional policies such as the output-based rebate can help manufacturing entities with higher costs. In the case of rebates, difficult design issues exist concerning how qualifying sectors are defined and how rebates are calculated. Border tax adjustments do not fully counterbalance competitiveness issues -- since U.S. products would still be at a disadvantage in global markets -- and their adoption creates the risk that such measures might violate World Trade Organization rules or result in retaliatory trade measures, engendering more conflict than cooperation and making it harder to reach global agreements that could effectively address competitiveness concerns.

<sup>i</sup> <http://www.pewclimate.org/international/CompetitivenessImpacts>