

Manufacturing Vulnerability Index

As Congress begins debate on President Obama's budget proposal, it should keep in mind that the United States economy is in the midst of a severe recession and any attempt to restrict carbon-dioxide emissions (CO₂), either by cap-and-trade or by carbon tax, will inflict further damage on the economy. Energy-intensive sectors (i.e. manufacturing) will experience the most severe consequences. As energy prices rise, producers will raise their prices out of necessity. However, because consumers will be constrained by their budgets, the consumption of energy-intensive products and services will decline.

As consumption declines so too does employment in those firms. For instance, by the year 2029, there would be nearly 3 million less manufacturing jobs in the United States, under a cap-and-trade regime envisioned in the Lieberman-Warner bill, which the Senate rejected last year. Even more alarming, CO₂ reductions of this magnitude would destroy more than half the jobs in some parts of the manufacturing sector by 2029, including machinery manufacturing (57%) and plastic and rubber products (54%).¹

Whereas Lieberman-Warner proposed cutting CO₂ emissions by 70% below the 2005 emission level, President Obama has proposed an 83% reduction. Any cut enacted along these lines does not bode well for manufacturing employment and most especially in those regions that are both coal dependent and manufacturing intense. However, other regions will not be spared the indirect costs that are associated with a cap-and-trade program. Consumers everywhere will be saddled with higher direct costs for energy and pay, yet again, as the prices of the products they buy rise.

The *Manufacturing Vulnerability Index (MVI)* reveals which areas of the country will experience direct harm under such a scheme. The East and West North Central, East South Central and South Atlantic regions are especially vulnerable to direct impacts and manufacturing job losses. Again, though some areas of the U.S. rank relatively low on the *MVI*, they will not escape the aforementioned indirect costs.

Methodology

Center for Data Analysis (CDA) analysts obtained employment data for each Congressional district and state from The U.S. Census Bureau.² The analysts obtained statewide energy resource mix data from the Environmental Protection Agency.³

A previous analysis of a cap-and-trade regime performed by the analysts revealed a dramatic increase in the price of coal and tremendous job loss in the manufacturing sector.⁴ The *Manufacturing Vulnerability Index (MVI)* was established to gauge a district and state's likely vulnerability to each of the observed trends. The percentage of employment based in manufacturing in each district was multiplied by the percentage of power generated by coal.

The higher the MVI, the more vulnerable a particular area is to the economic harm imposed by a policy that limits CO₂.

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¹ David W. Kreutzer, and Karen A. Campbell, "CO₂-Emission Cuts: The Economic Costs of the EPA's ANPR Regulations," Heritage Foundation Center for Data Analysis Report No. 08-10, October 29, 2008, at <http://www.heritage.org/Research/EnergyandEnvironment/cda08-10.cfm>.

² U.S. Census Bureau, "American Community Survey, 1 Year Estimates," Table C24030, http://factfinder.census.gov/home/saff/main.html?_lang=en

³ "eGRID2007 Version 1.1, Year 2005 Summary Tables," *Environmental Protection Agency*, 2008, at http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2007V1_1_year05_SummaryTables.pdf.

⁴ William W. Beach, David W. Kreutzer, Ph.D., Ben Lieberman, and Nicolas D. Loris, "The Economic Costs of the Lieberman–Warner Climate Change Legislation," Heritage Foundation Center for Data Analysis Report No. 08-02, May 12, 2008, at <http://www.heritage.org/Research/EnergyandEnvironment/cda08-02.cfm>.