

Income Distribution Impact of Climate Change Mitigation Policy in the Susquehanna River Basin (SRB) Economy

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- **The cost-side income distribution impacts of a carbon tax in the Susquehanna River Basin Region (parts of PA, NY and NJ) were analyzed.**
- **The impacts of a \$25 per ton carbon tax on the region's economy are modestly negative.**
- **GRP (Gross Regional Product) declined by approximately 0.3 percent in the short-term (3 yrs), and by almost double that in the long-term (10 yrs).**
- **Income distribution effects of the tax were also found to be slightly progressive as measured by income bracket changes, and two income distribution indices.**

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Distribution of the cost burden of climate change mitigation policies, like that of nearly all environmental and energy policies, will inevitably be uneven within and across categories of households and businesses. Overall, a large number of factors, both unique to carbon taxation and applicable to tax policy in general, can have a major bearing on the relative unevenness of impacts. These factors include magnitude of the carbon tax, energy-intensity of the economy, and the tax base, among others. We incorporate many of these factors in our analysis. In contrast to a number of previous studies, we found a carbon tax to be slightly progressive in terms of its impacts on the size distribution of personal income. The overriding reason for this is the fact that a carbon tax results in unevenly distributed output changes across sectors of the economy, as well as income and consumption patterns. The sectors affected most in the SRB region cause the impacts to be relatively greater on middle- and higher-income groups (e.g., unionized coal miners, utility shareholders). This contrasts with the lower impacts on food and housing, which make up a larger portion of the consumption basket of lower income brackets. The decrease in business profits due to the imposition of the carbon tax reinforces these result because its incidence is felt more strongly by the upper income bracket.

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