

Equity Impacts of Emission Markets: Evidence from the NOx Budget Program

Olivier Deschenes and Paige Weber

Abstract :

This paper studies the distribution of air quality benefits from the EPA's NOx Budget Program, a seasonal cap-and-trade market for NOx emissions. We apply a new empirical method to electricity generating unit-level data to estimate heterogeneous treatment effects and use an air pollution transport model to estimate the market's impacts on ambient concentration of fine particulate matter. We find the emission reduction caused by the market led to around 3,500 avoided deaths per regulated ozone season, and that the distribution of per capita benefits is comparable or smaller for Black compared to White individuals. Thus, we conclude that the market did not narrow the gap in electricity sector-generated pollution among these groups. We connect our empirical approach to predictions from a simple model of environmental markets to elucidate the underlying drivers of our findings.