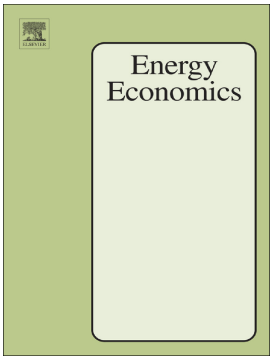

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Abstract

Policies to reduce greenhouse gas emissions and set the world on a path toward meeting long-run emissions reductions targets are being implemented in a decentralized and heterogeneous fashion both across and within nations. This patchwork approach raises concerns about emissions leakage from uncapped sources that may or may not face other forms of regulation. The potential for such leakage may be particularly keen within the electricity sector where market and political boundaries are not perfectly aligned or when emissions regulations differ by fuel source or by vintage of the electricity generator. In this paper we use simulation modeling to explore options for using emissions allowance value as a production incentive to reduce leakage to uncapped generators due to vintage differentiated regulation within the context of US EPA's Clean Power Plan. We show that updating allocation based on electricity production to covered emitting generators can reduce emissions leakage by 70 percent.

Key Words: output based allocation, updating, subnational, cap and trade

JEL Classification Numbers: H23, H73, Q58