

Economics of Climate Policy

WORKSHOP SERIES

The Regional Greenhouse Gas Initiative: Emission Leakage and the Effectiveness of Interstate Border Adjustments



Ian Sue Wing

Assistant Professor

Department of Geography, Boston University

We use theoretical and numerical general equilibrium models to analyze the Regional Greenhouse Gas Emission Initiative (RGGI), a cap-and-trade scheme to limit carbon dioxide emissions from electricity generators across ten states in the northeast U.S. Although RGGI's economic impacts are small, they induce substantial increases in power exports from unconstrained states which result in emission leakage rates of more than 50%. Harmonized taxes of 2-7% on electricity sales in participating states can neutralize leakage and increase aggregate abatement without significant adverse income effects. These results suggest that setting electricity tariffs in conjunction with the emission cap might improve RGGI's environmental performance.

Dr. Sue Wing is an Assistant Professor in the Geography Department at Boston University (BU), a research affiliate of the Centers for Energy & Environmental Studies and Transportation Studies at BU, the Joint Program on the Science & Policy of Global Change at the Massachusetts Institute of Technology (MIT), and a 2005-6 REPSOL-YPF Energy Fellow at Harvard's Kennedy School of Government. He holds a Ph.D. in Technology, Management & Policy from MIT and a M.Sc. in economics from Oxford University, where he was the 1994 Commonwealth Caribbean Rhodes Scholar. Sue Wing conducts research and teaching on the economic analysis of energy and environmental policy, with an emphasis on climate change and computational general equilibrium (CGE) analysis of economies' adjustment to policy shocks. His current research includes investigation of the impacts at the state and regional level of current U.S. proposals to mitigate climate change, sources of long-run change in the energy intensity of the U.S. economy, the theoretical and empirical analysis of induced technological change, the long-run effects of trade-mediated international productivity spillovers for global carbon emissions and leakage, and the implications of different methods of representing endogenous technological change in CGE models for climate change policy analysis. Sue Wing is supported by grants from the California Energy Commission and the Department of Energy's Office of Science.

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