

Title: US Climate Policy Analysis Using Dynamic Economic Models

Abstract: This dissertation seek to enhance the understanding of how federal- or state-level climate policies impact the economy and the environment in various contexts. I propose a set of three essays: 1) a dynamic stochastic model analysis of the federal-level US climate policy uncertainty, 2) an evaluation of the nationwide carbon tax impacts on the Great Lakes region of the US with a focus on the agriculture, energy, and transportation sectors, and 3) a study on the cross-state or state-federal climate policy interactions in the western US. Taken together, they provide implications for policymakers who are responsible for operating or developing their initiatives or other stakeholders who need to prepare for responses to the changing government policy regimes.