

Towards a carbon-neutral future: Scenario-based assessment of climate-induced risks to regional energy production and trends in the Kansas City area.

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Climate change and weather-related events contain elements of both risk and uncertainty. Risk is often defined as more short-term in nature, more measurable, and predictable. Uncertainty, on the other hand, arises from the unknown, is often more long term and typically is difficult to quantify. Addressing these challenges requires a greater focus on assessing key societal vulnerabilities; and only recently have the climate community began exploring it as a basis for understanding the functioning, resilience and vulnerabilities of coupled socio-economic and biophysical systems at policy-relevant time and space scales. This vulnerability paradigm informs this project's core goal, which is to refine knowledge about place-based firm and industry risk and uncertainty so that decision-makers will better understand the causes and ramifications of change, and improve their ability to understand the consequences of policy, strategy, and operational changes. In this presentation, we will discuss preliminary results from an ongoing study commissioned by the Kansas City Missouri Environmental Management Commission on the impacts of climate variability on past and current energy production and consumption trends; and how those trends could be impacted by potential changes in future climate. The study examines macroscale energy production issues as well as residential level energy use and conservation potential in the Kansas City area.