



Climate and Energy Decision Making

Sponsored Seminar

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Director, China Energy and Climate Project /
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Presenting on:



“Climate and Energy Policy for US Passenger Vehicles”

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12 noon

(Lunch served at 11:50 am)

129 Baker Conference Room
Department of Engineering and Public Policy

Seminar Abstract: Climate and energy security concerns have prompted policy action in the United States and abroad to reduce petroleum use and greenhouse gas (GHG) emissions from passenger vehicles. Policy affects the decisions of firms and households, which inevitably react to changing constraints and incentives. The model developments include introducing an empirically-based relationship between income growth and travel demand, turnover of the vehicle stock, and cost-driven investment both in reduction of internal combustion engine (ICE) vehicle fuel consumption as well as in adoption of alternative fuel vehicles and fuels. These developments offer a parsimonious way of capturing important physical detail and allow for analysis of technology-specific policies such as a fuel economy standard (FES) and renewable fuel standard (RFS), implemented individually or in combination with an economy-wide cap-and-trade (CAT) policy.

Speaker Bio: Dr. Valerie J. Karplus is the Director of the China Energy and Climate Project and a Research Scientist at the MIT Energy Initiative. She studies the design of policy options for addressing environmental and other externalities in resource intensive sectors of the economy in diverse national and regional contexts. Her work uses primarily energy-economic modeling and econometric techniques to explore how policies could incentivize changes in consumer and producer behavior and technology choices. in China. In her doctoral work at the Massachusetts Institute of Technology (MIT), she developed an economic model with extensive supplemental physical accounting in the transportation sector to evaluate policies for reducing greenhouse gas emissions from passenger vehicles in the United States.

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