KRISTEN MCCORMACK

Resources for the Future
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EMPLOYMENT

Resources for the Future, *Fellow* *2025-present*

U.S. Department of the Treasury, Office of Tax Analysis, *Financial Economist* *2023-2025*

Resources for the Future, *Research Assistant* *2015-2017*

EDUCATION

Harvard University
Ph.D., Public Policy (Economics Track) *2023*
Harvard Environmental Economics Pre-Doctoral Fellow
Dissertation Title: "Essays in Environmental Economics"
Committee members: David Cutler, Joseph Aldy, Marcella Alsan, and Edward Glaeser

Pomona College
B.A., Economics, Minor in Environmental Analysis, *summa cum laude* *2015*

FIELDS

Environmental Economics, Public Economics, Labor Economics

WORKING PAPERS AND RESEARCH IN PROGRESS

Policy options to Achieve US sustainable aviation fuel targets (with Mengying Wu, William A. Scott, Aaron Smith, Jingran Zhang, and James H. Stock) NBER Working Paper. 2025.
Decarbonizing aviation in the short term will likely entail replacing large quantities of petroleum jet fuel with sustainable aviation fuels (SAFs), which are predominantly biofuels. In the United States, biofuels are currently used as substitutes for gasoline and diesel in road transportation and are supported by a complex set of federal and state policies including the Renewable Fuel Standard (RFS), state low carbon fuel standards, and state and federal tax credits. Policies promoting SAF therefore interact with surface transport biofuel policies. In this paper, we use a new detailed partial equilibrium model of road and air transportation fuel markets to compare various policy options designed to achieve a target of 3 billion gallons of SAF by 2030. Our results suggest that the target is attainable with current technology but not with current policy. Several potential federal policies, including modifications to the existing RFS, a federal SAF tax credit, or a clean aviation standard could meet the 3 billion gallon target with similar emissions reductions and costs but different incidence. The lowest cost policy we study entails replacing all current biofuels policies with a modest carbon tax on fossil transportation fuels paired with a SAF tax credit.

Education under extremes: Temperature, student absenteeism, and disciplinary infractions. Job Market Paper. 2023.
How does student behavior respond to extreme temperatures and who is most affected? Using daily student-level data from a large urban school district, I estimate the causal effect of temperature on two dimensions of student behavior that are predictive of academic and later life outcomes: school absences and disciplinary referrals. Absenteeism increases in response to both hot and cold conditions, particularly for Black, Hispanic, and lower-income students. Hot conditions also increase the likelihood that a student will receive a disciplinary referral, an effect found only among students attending schools without air conditioning. Results suggest that warming temperatures may lead to more student behavioral problems and that unequal access to air conditioning may exacerbate racial, ethnic, and socioeconomic disparities in school.

Air pollution and student absences in a large urban school district.

Operation of emissions controls in US coal-fired power plants. (with Joshua Linn).

Does access to primary health care reduce morbidity from air pollution?

PUBLICATIONS

The price of biodiesel RINs and economic fundamentals. (with Scott H. Irwin and James H. Stock). *American Journal of Agricultural Economics.* 2020.
*Agricultural and Applied Economics Association Quality of Research Discovery Award

The D4 RIN is the tradable compliance certificate for the biomass-based diesel (BBD) mandate in the renewable fuel standard (RFS). Understanding the price dynamics of the D4 RIN is important for understanding the RFS because its price sets a ceiling on the ethanol RIN (D6) and because some observers have suggested that RIN price fluctuations are too large to be explained by economic theory. We use option pricing theory to develop a model of the D4 RIN in terms of its economic fundamentals: the spread between the price of biodiesel and petroleum diesel and the status of the biodiesel blenders' tax credit. The resulting D4 fundamental price closely tracks actual D4 prices. We conclude that RIN price volatility arises because of the design of the RFS and intrinsic features of the U.S. fuel supply system.

The roles of energy markets and environmental regulation in reducing coal-fired plant profits and electricity sector emissions. (with Joshua Linn). 2019. *RAND Journal of Economics*
Between 2005 and 2015, US electricity sector emissions of nitrogen oxides and sulfur dioxide, which harm human health and the environment, declined by two thirds, and many coal-fired power plants became unprofitable and retired. Intense public controversy has focused on these changes, but the literature has not identified their underlying causes. Using a new electricity sector model of the US eastern interconnection that accurately reproduces unit operation, emissions, and retirement, we find that electricity consumption and natural gas prices account for nearly all the coal plant profitability declines and resulting retirements. Environmental regulations had little effect on these outcomes.

Consignment auctions of free emissions allowances. (with Dallas Burtraw). 2017. *Energy Policy.*
While the initial distribution of emissions allowances is usually thought to be independent of the emissions outcome, free allocation can affect the efficiency and fairness of allowance trading. Inefficiency may result from thin allowance markets, poor price discovery, and regulatory or organizational complexities that hinder the recognition of opportunity costs. Concerns about fairness may result from intransparency in the process of transferring substantial allowance value. We explore the role of consignment auctions in mitigating these concerns. These revenue-neutral auctions return the financial value of allowances to their original holders while revealing prices and directing allowances to their highest-valued use. They also can be used to support a minimum price when allowances are freely distributed, which may facilitate program linkage. Consignment auctions have minimal administrative costs and do not necessarily involve government. Experience indicates that they can play an important role, especially in new markets.

The Supreme Court's stay of the Clean Power Plan: Economic assessment and implications for the future. (with Joshua Linn and Dallas Burtraw). 2016. *Environmental Law Reporter.*

Using weather forecasts to help manage meningitis in the West African Sahel. (with Rajul Pandya and others). 2015. *Bulletin of the American Meteorological Society.*

REPORTS

Approaches to address potential CO_2 emissions leakage to new sources under the Clean Power Plan. (with Dallas Burtraw, Joshua Linn, Karen Palmer, Anthony Paul, and Hang Yin). Comments to the US EPA on its proposed federal plan and model trading rules for the Clean Power Plan. 2016. RFF Report.

Is halting the Clean Power Plan economically justified? (with Dallas Burtraw and Joshua Linn). 2016. Resources.

Defining the unknown: A look at the cost of tighter ozone standards. (with Alan J. Krupnick and Joshua Linn). 2015. RFF Issue Brief.

Clearing the air: How market-based policies help meet the tighter US ozone Limit. (with Alan J. Krupnick and Joshua Linn). 2016. Resources.

Reversing the Medicaid fee bump: How much could Medicaid physician fees for primary care fall in 2015? (with Stephen Zuckerman and Laura Skopec). 2014. Urban Institute. Health Policy Center Brief.

Wind energy resource assessment: Information production, uses, and value. (with Katherine Dickinson, Luca Delle Monache, and Pierre Magontier). 2014. NCAR Technical Note.

HONORS, AWARDS, AND FELLOWSHIPS

Special Act Award, U.S. Department of the Treasury	*2024, 2025*
Harvard Kennedy School Taubman Center for State & Local Government, Research Fellow	*2023-present*
Ana Aguado Prize, Harvard Environmental Economics Program	*2023*
Christopher and Silvana Pascucci Graduate Student Dissertation Fellowship	*2023*
Harvard University, Doctoral Fellowship	*2022*
Agricultural and Applied Economics Association Quality of Research Discovery Award	*2021*
Derek Bok Certificate of Distinction in Teaching	*2021*
Joseph Crump Fellowship	*2020*
Morris B. Pendleton Prize in Economics, Pomona College	*2015*
Distinction in the Senior Exercise, Pomona College	*2015*
Leland M. Backstrand Memorial Award in Economics, Pomona College	*2014*
Phi Beta Kappa, Pomona College	*2014*

PROFESSIONAL ACTIVITIES

Referee Service:
American Economic Journal: Economics Policy, Journal of Urban Economics, Journal of Behavioral and Experimental Economics, Climate Policy, PLOS ONE

Conference Presentations:

Association of Environmental and Resource Economists Summer Conference	*2024*
Northeast Workshop on Energy Policy and Environmental Economics	*2022*
Association of Environmental and Resource Economists Summer Conference	*2020*

Other Service:

Graduate Women in Economics, Harvard Department of Economics, Core Team	*2020-2023*
Non-Resident Tutor, Pre-Careers Team, Lowell House	*2019-2023*
Harvard/MIT Application Assistance and Mentoring Program	*2022-2023*

TEACHING EXPERIENCE

Economics of Climate Change and Environmental Policy *2020–2021*
Harvard Kennedy School, Harvard College
Head Teaching Fellow, Teaching Fellow for Robert Stavins

Markets and Market Failures *2020*
Harvard Kennedy School
Teaching Fellow for Pinar Dogan, Marcella Alsan, and Janina Matuszeski

American Economic Policy *2019*
Harvard Kennedy School, Harvard College
Teaching Fellow for Jeffrey Liebman and Lawrence Summers

OTHER SKILLS

Stata, R, ArcGIS, Python (including ArcPy), MATLAB