

Max Vilgalys

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Education	Massachusetts Institute of Technology PhD, Social and Engineering Systems Fields: Energy and environmental economics, industrial organization Stanford University B.S. in Electrical Engineering	2017- 2013-2017
Experience	Research Assistant for Jing Li Research Assistant for Dava Newman Data Analyst Intern, Western Interstate Energy Board, Denver, CO Software Development Intern, Lichtblick Renewable Energy, Hamburg Policy Intern, U.S. Department of Energy, Washington, D.C.	2019-2020 2018 2017 2016 2016
Fellowships and Awards	Exxon Mobil Energy Fellow MIT Presidential Fellow Twitter Award, Stanford CS Project Fair, "Fake News" detector	2019-2020 2017-2018 2017
Languages	English (native), German (adequate)	
Coding	Python, Julia, Stata, C#/C/C++	
Research	<p>Adaptation to Climate Change in U.S. Agriculture (with Jing Li, in progress) Between rising temperatures, shifting rainfall patterns, and higher risks of catastrophic weather, climate change is expected to bring lower, less predictable yields to farms worldwide. Perhaps the largest source of uncertainty in these estimates is farms' capacity to adapt to environmental change. We measure the extent of farms' adaptation via a production function approach. We provide reduced form evidence that functional form assumptions of weather in agricultural production functions alter estimates of the extent of climate impacts and adaptation, by estimating machine learning models of crop yield and finding average marginal effects. In ongoing work, we construct a structural model of farm production, incorporating farms' adaptive measures.</p> <p>The Changing Role of Coal-fired Generation in the Western Interconnection (with Maury Galbraith, Dian Grueneich, and Ben Lim) Electric system operators have provided anecdotal evidence that in the 21st century, coal-fired generation is transitioning from providing baseload power to meeting demand more flexibly. We support these claims with an analysis of coal plant generation schedules in the American West. Using a nonparametric clustering algorithm on hourly emissions data from the EPA, we demonstrate that baseload operation in coal plants in the Western Interconnection decreased from 52% of operating days in 2000 to only 22% of operating days in 2016, and that the number of coal plants that spent the majority of their operating days providing baseload power declined over 75% over the same period. Work completed at the Western Interstate Energy Board, 2017. Presentation available here: https://westernenergyboard.org/2017/08/wieb-webinar-on-the-role-of-coal-in-the-west/</p>	
Presentations	Harvard Environmental Economics, MIT Social and Engineering Systems MIT Statistics and Data Science, MIT Social and Engineering Systems	2019 2018