

Lucas W. Davis

August 2024

Haas School of Business
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Current Appointments

Jeffrey A. Jacobs Distinguished Professor, Haas School of Business, UC Berkeley, 2018-
Interim Editor-in-Chief, *American Economic Journal: Economic Policy*, 2023-
Co-Editor, *American Economic Journal: Economic Policy*, 2018-
Research Associate, National Bureau of Economic Research, 2012-
Faculty Affiliate, Energy Institute at Haas, 2009-
Faculty Affiliate, Department of Agricultural and Resource Economics, 2013-
Faculty Affiliate, Energy and Resources Group, 2010-
Faculty Affiliate, Center for Effective Global Action, 2012-

Previous Appointments

Jeffrey A. Jacobs Distinguished Associate Professor, Haas School, UC Berkeley, 2016-2018
Harold Furst Associate Professor, Haas School of Business, UC Berkeley, 2012-2016
Assistant Professor, Haas School of Business, UC Berkeley, 2009-2012
Visiting Assistant Professor, Department of Economics, M.I.T., 2008-2009
Assistant Professor, Department of Economics, University of Michigan, 2005-2009
Faculty Research Fellow, National Bureau of Economic Research, 2008-2012
Faculty Director, Energy Institute at Haas, 2014-2020
Co-Editor, *Journal of Public Economics*, 2012-2015
Associate Editor, *Journal of Public Economics*, 2009-2012
Associate Editor, *American Economic Journal: Economic Policy*, 2013-2017

Education

Ph.D. in Economics, University of Wisconsin, 2005
Thesis: "Essays in Applied Microeconomics"
Advisors: Maurizio Mazzocco (chair), John Kennan, and Igal Hendel
M.S. in Economics, University of Wisconsin, 2002
B.A. Magna Cum Laude, Amherst College, 1996

Research and Teaching Interests

Energy and Environmental Economics

Peer-Reviewed Publications

"Uber and Traffic Fatalities" (with Michael Anderson), *Review of Economics and Statistics*, forthcoming.

"What Matters for Electrification? Evidence from 70 Years of U.S. Home Heating Choices", *Review of Economics and Statistics*, forthcoming.

"The Economic Determinants of Heat Pump Adoption", *NBER Environmental and Energy Policy and the Economy*, 2024, 5(1), 162-199, University of Chicago Press.

"Transmission Impossible? Prospects for Decarbonizing the US Grid" (with Catherine Hausman and Nancy Rose), *Journal of Economic Perspectives*, 2023, 37(4), 155-180.

"Electric Vehicles in Multi-Vehicle Households", *Applied Economics Letters*, 2023, 30(14), 1909-1912.

"Evidence of a Homeowner-Renter Gap for Electric Appliances", *Energy Journal*, 2023, 44(4), 53-64.

"Who Will Pay for Legacy Utility Costs?" (with Catherine Hausman), *Journal of the Association of Environmental and Resource Economists*, 2022, 9(6), 1047-1085.

"Air Conditioning and Global Inequality" (with Paul Gertler, Stephen Jarvis, and Catherine Wolfram), *Global Environmental Change*, 2021, 69, 102299.

"Estimating the Price Elasticity of Demand for Subways: Evidence from Mexico", *Regional Science and Urban Economics*, 2021, 87, 103651.

"Are Energy Executives Rewarded for Luck?" (with Catherine Hausman), *Energy Journal*, 2020, 41(6), 157-181.

"An Empirical Test of Hypercongestion in Highway Bottlenecks" (with Michael Anderson), *Journal of Public Economics*, 2020, 187, 104197.

"How Effective is Energy-Efficient Housing? Evidence from a Field Trial in Mexico (with Sebastian Martinez and Bibiana Taboada), *Journal of Development Economics*, 2020, 143, 102390.

"Should Electric Vehicle Drivers Pay a Mileage Tax?" (with James Sallee), *NBER Environmental and Energy Policy and the Economy*, 2020, University of Chicago Press.

"Do Energy Efficiency Investments Deliver at the Right Time?" (with Judson Boomhower), *American Economic Journal: Applied Economics*, 2020, 12(1), 115-139.

"Heat Exposure and Global Air Conditioning" (with Leopold Biardeau, Paul Gertler and Catherine Wolfram), *Nature Sustainability*, 2020, 3, 25-28.

"An Economic Perspective on Mexico's Nascent Deregulation of Retail Petroleum Markets" (with Shaun McRae and Enrique Seira), *Economics of Energy & Environmental Policy*, 2019, 8(2), 181-199

"How Much Are Electric Vehicles Driven?" *Applied Economics Letters*, 2019, 26(18), 1497-1502.

"Evidence of a Homeowner-Renter Gap for Electric Vehicles", *Applied Economics Letters*, 2019, 26(11), 927-932.

"Are Fuel Economy Standards Regressive?" (with Chris Knittel), *Journal of the Association of Environmental and Resource Economists*, 2019, 6, 37-63.

"The Environmental Cost of Global Fuel Subsidies", *Energy Journal*, 2017, 38, 7-27.

"Evidence of a Decline in Electricity Use by U.S. Households", *Economics Bulletin*, 2017, 37(2), 1098-1105.

“Anticipation, Tax Avoidance, and the Price Elasticity of Gasoline Demand” (with John Coglianesi, Lutz Kilian, and James Stock), *Journal of Applied Econometrics*, 2017, 32(1), 1-15.

“Saturday Driving Restrictions Fail to Improve Air Quality in Mexico City” *Scientific Reports*, February 2017.

“Does Better Information Lead to Better Choices? Evidence from Energy-Efficiency Labels” (with Gilbert Metcalf), *Journal of the Association of Environmental and Resource Economists*, 2016, 3(3), 589-625.

“The Distributional Effects of U.S. Clean Energy Tax Credits” (with Severin Borenstein), *NBER Tax Policy and the Economy*, 2016, 30(1), 191-234.

“Market Impacts of a Nuclear Power Plant Closure” (with Catherine Hausman), *American Economic Journal: Applied Economics*, 2016, 8(2), 92-122.

“Contribution of Air Conditioning Adoption to Future Energy Use under Global Warming” (with Paul Gertler), *Proceedings of the National Academy of Sciences*, 2015, 112(19), 5962-5967.

“Environmental Health Risks and Housing Values: Evidence from 1,600 Toxic Plant Openings and Closings” (with Janet Currie, Michael Greenstone, and Reed Walker), *American Economic Review*, 2015, 105(2), 678-709.

“Bonding Requirements for Natural Gas Producers” *Review of Environmental Economics and Policy*, 2015, 9(1), 128-144.

“An Economic Perspective on the EPA's Clean Power Plan” (with Meredith Fowlie, Lawrence Goulder, Matthew Kotchen, James Bushnell, Michael Greenstone, Charles Kolstad, Christopher Knittel, Robert Stavins, Michael Wara, Frank Wolak, and Catherine Wolfram), *Science*, 2014, 346, 815-816.

“Cash for Coolers: Evaluating a Large-Scale Appliance Replacement Program in Mexico” (with Alan Fuchs and Paul Gertler), *American Economic Journal: Economic Policy*, 2014, 6(4), 207-238.

“A Credible Approach for Measuring Inframarginal Participation in Energy Efficiency Programs” (with Judson Boomhower), *Journal of Public Economics*, 2014, 113, 67-79.

“The Economic Cost of Global Fuel Subsidies”, *American Economic Review: Papers and Proceedings*, 2014, 104(5), 581-585.

“The Equity and Efficiency of Two-Part Tariffs in U.S. Natural Gas Markets” (with Severin Borenstein), *Journal of Law and Economics*, 2012, 55(1), 75-128.

“Deregulation, Consolidation, and Efficiency: Evidence from U.S. Nuclear Power” (with Catherine Wolfram), *American Economic Journal: Applied Economics*, 2012, 4(4), 194-225.

“Prospects for Nuclear Power” *Journal of Economic Perspectives*, 2012, 26(1), 49-66.

“Are Renters Less Likely to Have Energy Efficient Appliances?” in *Design and Implementation of U.S. Climate Policy*, edited by Don Fullerton and Catherine Wolfram, University of Chicago Press, 2012.

“The Effect of Power Plants on Local Housing Prices and Rents: Evidence from Restricted Census Microdata” *Review of Economics and Statistics*, 2011, 93(4), 1391-1402.

“Estimating the Effect of a Gasoline Tax on Carbon Emissions” (with Lutz Kilian), *Journal of Applied Econometrics*, 2011, 26(7), 1187-1214.

“The Allocative Cost of Price Ceilings in the U.S. Residential Market for Natural Gas” (with Lutz Kilian), *Journal of Political Economy*, 2011, 119(2), 212-241.

“The Effects of Preferential VAT Rates Near International Borders: Evidence from Mexico” *National Tax Journal*, 2011, 64(1), 85-104.

“Do Americans Consume Too Little Natural Gas? An Empirical Test of Marginal Cost Pricing” (with Erich Muehlegger), *RAND Journal of Economics*, 2010, 41(4), 791-810.

“International Trade in Used Vehicles: The Environmental Consequences of the North American Free Trade Agreement” (with Matthew E. Kahn), *American Economic Journal: Economic Policy*, 2010, 2(4), 58-82.

“The Welfare Costs of Unreliable Water Service” (with Brian Baisa, Stephen Salant, and William Wilcox), *Journal of Development Economics*, 2010, 92(1), 1-12.

“The Effect of Driving Restrictions on Air Quality in Mexico City” *Journal of Political Economy*, 2008, 116(1), 38-81.

“Durable Goods and Residential Demand for Energy and Water: Evidence from a Field Trial” *RAND Journal of Economics*, 2008, 39(2), 530-546.

“The Effect of Health Risk on Housing Values: Evidence from a Cancer Cluster” *American Economic Review*, 2004, 94(5), 1693-1704.

Working Papers

“The Distributional Effects of U.S. Tax Credits for Heat Pumps, Solar Panels, and Electric Vehicles” (with Severin Borenstein), June 2024.

“Political Ideology and U.S. Electric Vehicle Adoption” (with Jing Li and Katalin Springel), October 2023.

“The Competitive Effects of Entry in the Deregulated Mexican Gasoline Market” (with Shaun McRae and Enrique Seira), Updated December 2023.

Other Publications

“Uber and Alcohol-Related Traffic Fatalities” (with Michael Anderson), *CATO Institute Research Briefs*, March 2022.

“The Environmental Cost of Global Fuel Subsidies”, *CATO Institute Research Briefs*, June 2016.

“Power of the Atom” (with Catherine Hausman), *Finance & Development*, December 2015.

“The Cost of Global Fuel Subsidies” *Milken Institute Review*, Third Quarter, 2014.

“Modernizing Bonding Requirements for Natural Gas Producers” *Hamilton Project Paper*, June 2012.

“Cash for Clunkers? The Environmental Impact of Mexico’s Demand for Used Vehicles” (with Matthew E. Kahn), *Access Magazine*, Spring 2011.

Blog Posts

[Do California Farmers Respond to Electricity Prices?](#) (with F.B., L.P., and M.W.) 7/29/2024

How new efforts to curb groundwater depletion will impact the Golden State’s electricity use.

[Clean Energy Tax Concerns](#) 6/17/2024

Credits for heat pumps, electric vehicles, and solar panels still go mostly to the wealthy.

[Why Are Heat Pump Sales Decreasing?](#) 4/29/2024

At this rate it is not going to be easy to meet decarbonization goals.

[Would You Buy an Electric Vehicle from Amazon?](#) 3/18/2024

Online vehicle sales could reduce double marginalization.

[What Can Futures Markets Tell Us About Biden’s LNG Pause](#) 2/12/2024

Prices for 2025, 2026, and 2027 shed light on what could lie ahead for consumers.

[Does Station Competition Drive Gas Prices?](#) 10/16/2023

New Energy Institute working paper finds retailers cut prices when rivals are nearby.

[Political Ideology and U.S. Electric Vehicle Adoption](#) 11/6/2023

New Energy Institute working paper measures EV concentration in the most Democratic counties.

[More Good News for Electric Vehicle Buyers](#) 10/16/2023

The broadening of the EV market means that government subsidies will flow to buyers not sellers.

[Weekends Are No Free Lunch Anymore](#) 9/5/2023

U.S. peak electricity demand on Saturdays and Sundays is now almost as high as on other days.

[Are Record Temperatures Causing Record U.S. Electricity Consumption?](#) 7/31/2023

Not in most places, but the summer is not yet over.

[Are Heat Pump Subsidies Regressive?](#) 6/5/2023

New research finds little relationship between heat pump adoption and household income.

[Three Facts about Electric Heating in California](#) 5/8/2023

California has a long way to go if it is going to electrify homes.

[Here Come the Lumens](#) 3/27/2023

LEDs are great even if they won’t necessarily result in large net energy savings.

[A Very Expensive Winter](#) 2/21/2023

Wholesale electricity prices in California this winter were the highest in a decade.

[Oil Price Fluctuations and the Power of OPEC](#) 12/12/2022

A wild recent day for oil prices demonstrates OPEC’s enduring influence.

[Putting China’s Coal Consumption in Context](#) 10/31/2022

The United States and China are going in the opposite direction on coal.

[How High Did California’s Electricity Prices Get?](#) 9/12/2022

Wholesale electricity prices soared during California’s September heat wave.

[How Many U.S. Households Don’t Have Air Conditioning?](#) 8/15/2022

There are 14 million U.S. households without air conditioning including almost 4 million in California.

[Market Integration and Renewable Energy](#) 7/11/2022

New research explores the economic benefits of recent transmission investments in Chile.

[Did CFL Subsidies Crowd Out LED Purchases?](#) 5/31/2022

New research finds that timing matters for standards and subsidies.

[Swedish E-Bikes](#) 4/25/2022

Uppmärksamhet! New research digs into the economics of electric bicycles.

[Small Actions Matter for Reducing Oil Consumption](#) 3/28/2022

Right now even modest steps taken to use less gasoline and diesel would have a big impact on prices.

[The Most Obvious Way to Avoid Another Texas Blackout](#) 1/31/2022

Twelve months after the Texas power crisis and we have already forgotten the key lesson.

[Are U.S. Heating Fuels Becoming Unaffordable?](#) 12/13/2021

Despite recent hyperbole, U.S. heating fuel prices are not high by historical standards.

[The Geography of Heating Oil and Propane](#) 11/1/2021

Don't forget about the 11 million U.S. households that heat with these fuels.

[Three Facts about EVs and Multi-Vehicle Households](#) 9/20/2021

Within-household substitution between vehicles could undermine the environmental benefits of EVs.

[Air Conditioning and Global Inequality](#) (with Stephen Jarvis) 8/9/2021

Unequal access to air conditioning has important implications for productivity, health, and education.

[Who Will Pay for Legacy Utility Costs?](#) (with Catherine Hausman) 7/6/2021

What does the "electrify everything" movement mean for natural gas customers who are left behind?

[Can Energy Efficiency Help Avoid Blackouts?](#) 5/28/2021

Energy efficient air conditioners save electricity exactly when the grid is most strained.

[Evidence of a Homeowner-Renter Gap for Electric Appliances](#) 4/12/2021

Renters are more likely to have electric heating, electric hot water heaters, and other electric appliances.

[The Texas Power Crisis, New Home Construction, and Electric Heating](#) 2/22/2021

No state has built as many new homes as Texas over the last decade and most of them use electric heat.

[What Matters for Electrification?](#) 1/4/2021

Electricity is replacing on-site fossil fuel consumption for U.S. home heating and energy prices explain why.

[Four Facts about Covid and U.S. Electricity Consumption](#) 11/9/2020

New working paper by Steve Cicala documents large changes in how Americans use electricity.

[Time to Vote Out Coal](#) 9/21/2020

The U.S. cannot afford four more years of pandering to coal.

[Electrification Mandates and Housing Growth](#) 8/17/2020

Electrification mandates for new homes take a long time to reduce carbon dioxide emissions.

[Five Arguments for Making Subways Free](#) 6/30/2020

Lowering subway fares would save energy and make cities greener.

[Remdesivir, Low-Carbon Energy, and the Origins of Innovation](#) 5/11/2020

How do we foster innovation to solve COVID-19 and climate change?

[The High Cost of Nuclear Jobs](#) 3/9/2020

Backers see job creation, but I see high costs for ratepayers.

[Putting Solar in All the Wrong Places](#) 2/3/2020

High retail electricity prices, not economic value, are driving U.S. investments in rooftop solar.

[Heat Exposure and Global Air Conditioning](#) 12/9/2019

New paper ranks 219 countries and 1,692 cities based on air conditioning potential.

[Electrification? We Are Already On the Way](#) 11/4/2019

In 1960, only 2% of U.S. homes were heated with electricity. Today it's 38%.

[Limitations of Standards](#) 9/16/2019

U.S. energy-efficiency requirements for air conditioners illustrate the inherent limitations of standards.

[Mexico Goes Backward on Renewables](#) 8/12/2019

Mexico's decision to suspend renewables auctions is bad news for Mexican electricity consumers.

[Nuclear Moral Hazard](#) (with Catherine Hausman) 6/24/2019

Recent sales of U.S. nuclear plants raise questions about safety, liability, and economic incentives.

[An Electric Vehicle in Every Driveway?](#) 5/13/19

To meet ambitious climate goals EVs need to be more than niche product for rich people.

[Should Electric Vehicle Drivers Pay a Mileage Tax?](#) (with Jim Sallee) 4/8/19

EV drivers don't pay the gasoline tax so pay less for roads.

[Millennials Grab the Wheel and Step on the Gas](#) 2/25/19

New evidence shows millennials are not so different after all.

[Why Economists Can't Stand Shortages](#) 1/14/19

Mexico's gasoline shortages and the lessons of the U.S. gasoline crises of the 1970s.

[U.S. Power Plant Emissions Down 45% since 2010](#) 12/10/18

Environmental damages from U.S. power plants down \$100+ billion annually since 2010.

[All Charged Up, No Place to Go](#) 11/5/18

Today EVs are driven much less than other cars, which has big implications for the environment.

[Are Oil and Gas Executives Overpaid?](#) (with Catherine Hausman) 9/4/18

U.S. oil and gas executives are "paid-for-luck," with executive compensation increasing with oil prices.

[Apartments Rarely Having Charging Stations. But Electric Vehicles Need Them](#) 7/30/18
As EVs make more inroads, giving tenants somewhere to plug in their cars could become a selling point.

[Does Rooftop Solar Help the Distribution System?](#) 6/25/18
An opportune moment to revisit a pair of prescient studies by Michael Cohen and coauthors.

[Big Data in a Little Package](#) 5/7/18
Temperature loggers can help us build more energy-efficient homes.

[Why Am I Paying \\$65/year for Your Solar Panels?](#) 3/26/18
700,000 California homes now have solar panels; what does this mean for everyone else's rates?

[The Evergreen State's Golden Opportunity to Lead on Climate](#) 2/12/18
Time for Washington to become the first U.S. state with a carbon tax.

[What Does the Stock Market Tell Us about the California Wildfires?](#) 1/15/18
California utilities have lost \$20 billion in market value since the wildfires began.

[Are Mexican Renewables Really this Cheap?](#) (with Veronica Irastorza) 12/4/17
The winning bids in the latest Mexican renewables auctions were below two cents per kilowatt hour.

[Will Global Warming Increase or Decrease U.S. Energy Consumption?](#) 10/23/17
I thought I knew the answer, but now it's not so clear.

[Is Solar Really the Reason for Negative Electricity Prices?](#) 8/28/17
Solar gets all the attention, but another explanation is at least as important.

[Cooling India](#), 7/24/17.
A new study from LBNL highlights the enormous potential growth for air conditioning in India.

[Stop Blaming Drivers for Mexico City's Smog](#), 6/5/17.
Cleaner gasoline could be the key to reducing ozone in Mexico City.

[Evidence of a Decline in Electricity Use by U.S. Households](#), 5/8/17.
It has been slowing down for decades, but is electricity use by American households now going down?

[Four Reasons Why Chile is the Biggest Solar Market in Latin America](#), 3/27/17.
Despite recent challenges, Chile remains an attractive market for grid-scale solar.

[Learning to Frack](#), 2/13/2017
Technological advances and learning-by-doing have made U.S. shale oil profitable even at \$55/barrel.

[Policy Uncertainty Discourages Innovation and Hurts the Environment](#), 12/19/16.
Uncertainty about U.S. environmental policies creates an incentive for firms to delay investments.

[Why Aren't Environmentalists Supporting a Carbon Tax in WA State?](#), 10/31/16.
Environmental groups are standing in the way of Washington State becoming a climate leader.

[Addicted to Oil: U.S. Gasoline Consumption is Higher than Ever](#), 9/26/16.
Many people thought U.S. gasoline consumption had already peaked. They were wrong.

[King Coal is Dethroned in the U.S.](#), 8/22/2016.
How bad is the outlook for U.S. coal? Very bad.

[The Global Impact of Air Conditioning: Big and Getting Bigger](#), 7/24/16.
As incomes rise around the world people are buying air conditioners at alarming rates.

[Move Over PEMEX](#), 7/11/16
For the first time in decades, Mexican drivers now have a choice when buying gasoline.

[Do Energy Efficiency Investments Deliver at the Right Time?](#) (with J. Boomhower), 6/6/16
Energy-efficient air conditioners save electricity during the most valuable hours of the year.

[Automakers Complain, but CAFE Loopholes Make Standards Easier to Meet](#), 4/11/16
With gasoline prices at \$2 per gallon, automakers are pushing back hard on U.S. fuel economy standards.

[Getting Energy Prices Right](#), 3/7/16
Ambitious new IMF research quantifies energy externalities for 156 countries.

[New CAFE Standards: The Good, the Bad, and the Ugly](#), 1/25/16
A brief economic primer on how U.S. fuel economy standards work.

[Don't Be a Grinch When it Comes to Holiday Lights](#), 12/21/15
Unless you keep them up until March, It probably doesn't make sense to replace your holiday lights with LEDs.

[Historic Opportunity to Reduce Global Fuel Subsidies](#), 11/9/15
An historic opportunity for Saudi Arabia and other countries to eliminate energy subsidies.

[Are Clean Energy Tax Credits Equitable?](#) 7/20/15
Income tax credits for solar panels and electric cars go overwhelmingly to high-income households.

[A Deeper Look into the Fragmented Residential Solar Market](#) (with Alex Chun), 6/8/15
The residential solar market in California is highly competitive with hundreds of active companies.

[Air Conditioning and Global Energy Demand](#), 4/27/15
Rising global incomes will drive increased global adoption of air conditioning.

[How Should We Design Government Policies to Stimulate Innovation?](#) 3/23/15
Early-stage cleantech grants very effective, according to new research

[Raise the Gas Tax](#), 1/5/15
U.S. gasoline and diesel taxes should be much higher to reflect externalities.

[Goin' for Broke in Texas](#), 12/1/14
New research shows greater accountability for oil producers improves environmental outcomes.

[Better Yellow Labels](#), 10/27/14
Lowering air conditioning costs with location-targeted energy efficiency labels.

[Raising Gas Prices to Grow an Economy](#), 8/18/14
Raising gasoline prices can increase efficiency, slow global warming, and grow the economy.

[Unlocking Cost Savings with Cap-and-Trade](#), 6/9/14
For decades, economists have emphasized the efficiency gains associated with market-based policies.

[Driving Restrictions and Air Quality](#), 5/5/14
Saturday driving restrictions fail to improve air quality in Mexico City.

[Too Big to Fail?](#) (with Catie Hausman), 3/31/14
The economic and environmental impact of closing California's San Onofre Nuclear Generating Station.

[A Small Bet with Big Stakes](#), 2/18/14
Two economists make a bet on how much it costs to build a nuclear power plant.

[Why Would Google Pay \\$3.2 Billion for Nest?](#) (with Howard Chong), 1/20/14
It's all about the data.

[Global Gas Guzzlers](#), 12/2/13
Gasoline subsidies are inefficient because they lead people to drive too much and own low-MPG vehicles.

[20/20 Vision](#), 10/21/13
Paying people to reduce electricity usage is expensive because many beneficiaries are non-additional.

[Ex Post Evaluation of the Empire State Building Retrofit](#), 9/3/13
Energy consumption data is now available on the world's tallest LEED certified building.

[Deconstructing the Rosenfeld Curve](#), 8/5/13
The Rosenfeld curve does not prove that California's energy-efficiency policies work.

[A Step in the Right Direction for Indonesia](#), 7/1/13
Recent moves to unwind gasoline and diesel subsidies are an important step toward economic efficiency.

[Price at the Pump Worldwide](#), 6/10/13
Gasoline and diesel subsidies steer drivers towards overconsumption.

[Venezuelan Gas Guzzlers](#), 5/13/13
Extreme gasoline subsidies lead to extreme gasoline consumption.

[Fuel Economy Standards and Used Cars](#), 8/8/13
Tightening fuel economy standards for new vehicles leads older vehicles to stay in the fleet longer.

[Renting Inefficiency](#) (with David Levine), 11/26/12
Renters are much less likely than homeowners to have energy-efficient appliances.

[Natural Gas Shortages in Mexico](#), 9/24/12
Mexico is experiencing 50%+ curtailments of natural gas, a direct consequence of price controls.

[Optimal Federalism](#), 8/27/12
Scale economies and spillovers provide economic rationale for Federal regulation of oil and gas drilling.

[Bonding Requirements for Natural Gas Producers](#), 6/4/12
Current bonding requirements insufficient for environmental risks from hydraulic fracturing.

[Free Lunch?](#) 4/30/12
Ex post analysis of Mexico energy-efficiency program shows energy savings much smaller than predicted.

Teaching Experience

Energy and Environmental Markets, Full-Time MBA Program (UC Berkeley 2020-2024)
Energy and Environmental Markets, Evening Weekend MBA Program (UC Berkeley 2022-2024)
Data Analysis for Management, Executive MBA Program (UC Berkeley 2017-2020)
Data and Decisions, Full-Time MBA Program (UC Berkeley 2010-2019)
Energy and Environmental Markets, Undergraduate (UC Berkeley 2010, 2012)
Berkeley Energy Economics Summer School, Ph.D. (UC Berkeley 2011-2013, 2016, 2018, 2023)
Energy Economics and Policy, Undergraduate and Masters (M.I.T. 2009)
Public Finance, Ph.D. (University of Michigan 2005-2007)
Mathematical Statistics, Undergraduate (University of Michigan 2005-2007)

Grants and Awards

Cheit Teaching Award, Full-Time MBA Program, 2023
Finalist for Cheit Teaching Award, Full-Time MBA Program, 2022
Cheit Award for Excellence in Teaching, Berkeley-Haas Executive MBA Program, 2020
Sloan Foundation Grant for Energy Camp, 2019-2020
Oxford Policy Management, #29290, 2019-2020
California Air Resources Board, 2019-2020
International Growth Centre Grant, I-VRE-VCCP-VXXXX-89470, 2018-2019
Sloan Foundation Grant for Energy Camp #B2016-6061, 2016
California Energy Commission Grant PON-14-306 EPIC Program, 2015
Finalist for Cheit Teaching Award, Full-Time MBA Program, 2014, 2017, 2018
Sloan Foundation Grant for Energy Camp #B2014-11, #B2013-04, 2013
American Economic Review, Excellence in Refereeing Award, 2013 and 2017
Center for Teaching Excellence Outstanding New Instructor Award, 2011
Schwabacher Fellowship, 2011-2012.
Grant R03ES016608, National Institutes of Health, 2009-2011.
National Institutes of Health, Pre-Doctoral Training Grant, 2002-2005.
Christensen Award in Empirical Economics, 2004.

Referee

American Economic Journal: Economic Policy, American Economic Journal: Applied Economics, Applied Economics Letters, American Economic Review, American Law and Economics Review, Applied Economics, B.E. Journal of Economic Analysis & Policy, California Management Review, Climate Policy, Climatic Change, Ecological Economics, Econometrica, Economic Inquiry, Economic Journal, Economics Letters, Empirical Economics, Energy Economics, Energy Journal, Energy Policy, Energy Research & Social Science, Environmental and Resource Economics, Environmental Research Letters, Environmental Science and Technology, European Economic Review, Joule, Journal of Applied Econometrics, Journal of the Association of Environmental and Resource Economists, Journal of Development Economics, Journal of Economic Literature, Journal of Economics & Management Strategy, Journal of Environmental Economics and Management, Journal of the Air & Waste Management Association, Journal of the European Economic Association, Journal of Human Resources, Journal of Industrial Economics, Journal of International Economics, Journal of Labor Economics, Journal of Policy Analysis and Management, Journal of Political Economy, Journal of Public Economics, Journal of Transport Economics and Policy, Journal of Urban Economics, Labour Economics, Management Science, Mitigation and Adaptation Strategies for Global Change, National Tax Journal, Nature Climate Change, Nature Communications, Nature Energy, Nature Sustainability, Quarterly Journal of Economics, RAND Journal of Economics, Regional Science and Urban Economics, Review of Economics and Statistics, Review of Economic Studies, Review of Environmental Economics and Policy, Review of Industrial Organization, Science, Transportation, Water Resources Research, World Bank Economic Review

Other Referee Activities

External Reviewer, National Science Foundation
External Reviewer, Sloan Foundation
External Reviewer, U.S. Census Bureau, Center for Economic Studies
External Reviewer, World Bank
External Reviewer, Energy and Economic Growth Applied Research Programme
External Reviewer, Cato Institute

Invited Presentations

2024: Energy Institute POWER Conference on Energy Research and Policy (discussant), University of California, Irvine, Applied Microeconomics Seminar (presenter), UC Berkeley, Energy Institute Camp (presenter)

2023: Berkeley Energy & Resources Collaborative Energy Summit (moderator), Energy Institute POWER Conference on Energy Research and Policy (presenter), UC Berkeley Haas School of Business Economic Analysis and Policy Group John Morgan Memorial Conference (presenter), National Bureau of Economic Research Environmental and Energy Policy and the Economy Conference (presenter), London School of Economics / Imperial College / King's College Annual Summer Workshop in Environmental Economics (presenter), UC Berkeley Energy Institute Workshop (presenter), University of Southern California Applied Microeconomics Seminar (presenter), Online Spatial and Urban Seminar (panelist), UC Berkeley Energy Institute Research Briefing (presenter)

2022: University of Alabama Department of Economics, Energy Institute POWER Conference on Energy Research and Policy (moderator and discussant), UC Berkeley Haas School of Business Economic Analysis and Policy Group John Morgan Memorial Conference, Dallas Federal Reserve Energy Transition Conference (presenter), Energy Institute Research Briefing (presenter)

2021: Berkeley-Harvard-Yale Energy and Environmental Economics Seminar, Cornell University Dyson School of Applied Economics and Management Environmental Economics Seminar, Chinese University of Hong Kong, Energy Institute POWER Conference on Energy Research and Policy, Peking University HSBC Business School Economics Seminar, ETH Zurich Center for Energy Policy and Economics Pan-Institute Series in Environmental and Energy Economics and Policy jointly organized with ZEW, the European Institute on Economics and the Environment, and the Grenoble Ecole de Management, Southern California Edison Distinguished Speaker Series, National Apartment Association / Smart Electric Power Alliance Co-Hosted Webinar "Apartments and Energy Providers Meet the Moment Together" (panelist), National Bureau of Economic Research New Directions in Transportation Economics, Energy Institute Webinar "Who Will Pay for Legacy Utility Cost?", University of Pennsylvania Kleinman Center for Energy Policy, Haas Texas Alumni Event "US Electricity Markets Opportunities and Challenges", University of Pennsylvania Energy, Economics and Finance Workshop, Energy Institute Research Briefing, Georgetown University Applied Microeconomics Seminar, Carnegie Mellon University and University of Pittsburgh Department of Economics Joint Applied Microeconomics Seminar

2020: Energy Institute POWER Conference on Energy Research and Policy (moderator), Energy Institute Research Briefing, University of Wisconsin Department of Agricultural & Applied Economics, Chinese University of Hong Kong Shenzhen

2019: American Economic Association Annual Meeting (organizer and presenter), BERC Energy Summit "Utilizing New Partnerships in Grid Services" (panelist), UC Berkeley Haas School of Business Finance Lunch, Energy Institute POWER Conference on Energy Research and Policy

(moderator), National Bureau of Economic Research Environmental and Energy Policy and the Economy Conference, Massachusetts Institute of Technology Center for Energy and Environmental Policy Research Workshop, University of California Santa Cruz Economics Department, Energy Institute (organizer), Energy Institute Research Briefing, Hamilton Project Forum “Economic Policy Innovations to Combat Climate Change” at Stanford SIEPR (panelist)

2018: Inter-American Development Bank Climate Change and Sustainable Development Seminar, Stanford University Department of Economics Public and Environmental Economics Workshop, Energy Institute POWER Conference on Energy Research and Policy (organizer and moderator), Fundação Getulio Vargas Escola Brasileira de Economia e Finanças in Rio de Janeiro, Chile California Council's Clean Energy Conference, University of California Berkeley Center for the Built Environment, Energy Institute (organizer), Global Climate Action Summit, World Bank Event “Preparing for Internal Climate Migration in Urban Areas” (panelist), Energy Institute Research Briefing, University of California at Santa Barbara Babcock Memorial Lecture, University of California at Santa Barbara Occasional Conference on Environmental Economics (discussant), University of California at Davis Environment and Energy Seminar

2017: Instituto Tecnológico Autónomo de México, Berkeley Energy & Resources Collaborative Energy Summit 2017 “Corporate Renewables Procurement” (moderator), Energy Institute POWER Conference on Energy Research and Policy (organizer and moderator), University of Chicago's Energy Policy Institute, Stanford Institute for Economic Policy Research Workshop on Economic Effects from Climate Change (discussant), Toulouse School of Economics Seminar on Environmental Economics, Paris School of Economics Seminar on Regulation and the Environment, Energy Institute (organizer and presenter), Energy Institute Research Briefing (organizer and presenter), University of California Santa Barbara Occasional Conference on Environmental Economics (discussant), University of California Berkeley Climate Change Economics Lunch, Berkeley Energy & Resource Collaborative Workshop “Renewable Energy in Latin America” (organizer and moderator)

2016: American Economic Association Annual Meeting (presenter and discussant), Berkeley Energy & Resources Collaborative Energy Summit 2016 “Future of Natural Gas” (panelist), Climate One “Nuclear Power Five Years after Fukushima” at San Francisco's Commonwealth Club, Energy Institute POWER Conference on Energy Research and Policy (organizer, moderator, and discussant), NBER Energy Policy Tradeoffs between Economic Efficiency and Distributional Equity, University of California at Los Angeles Luskin School of Public Affairs Applied Social Science Seminar, Energy Institute (organizer), Lawrence Berkeley Laboratory Energy Technologies Seminar, NBER Summer Institute Environmental and Energy Economics Meeting (discussant), University of California Berkeley Nuclear Innovation Bootcamp, Energy Institute Research Briefing (organizer), Carnegie Mellon University Applied Micro Seminar, University of Chicago Harris School Public Policy and Economics Seminar, University of California Berkeley Electrical Engineering and Computer Sciences, University of Michigan Department of Economics, Resources for the Future

2015: University of California Berkeley Department of Economics, Energy Institute POWER Conference on Energy Research and Policy (organizer and moderator), NBER Environmental and Energy Economics Program Meeting, Latin American Business Conference Energy Panel with Jim Rogers and Nam Nguyen (moderator), Yale University Department of Economics Applied Microeconomics Seminar, Energy Institute, NBER 30th Annual Tax Policy and the Economy Conference, Energy Institute Research Briefing, University of California at Berkeley Department of Agriculture and Resource Economics Environment and Resources Seminar, University of Pennsylvania Wharton Applied Economics Workshop, Duke University Research Triangle Institute's Resource and Environmental Economics Seminar Series, MIT Center for Energy and Environmental Policy Research Policy Workshop, Energy Institute Energy Economics Seminar

2014: American Economic Association Annual Meeting, NBER Environmental and Energy Economics Program Meeting (discussant), Energy Institute POWER Conference on Energy

Research and Policy (organizer and discussant), Behavioral Economics Annual Meeting, Overview Talk “Paternalism and Energy Efficiency” (discussant), Energy Institute, NBER Summer Institute Energy Infrastructure Meeting (panelist), NBER Summer Institute Real Estate Meeting (discussant), Inter-American Development Bank Workshop at UC Berkeley “Introduction to Impact Evaluation”, Center for Global Action-Development Impact Evaluation, “Workshop on Measuring Development: Energy and Environment”, Energy Institute Research Briefing, Arizona State University Department of Economics, University of California Energy and Resources Group Colloquium, UC Berkeley Haas School of Business Board Meeting Faculty Research Spotlight

2013: American Economic Association Annual Meeting (presenter and discussant), University of California Berkeley Agriculture and Resource Economics, California State Assembly Committee on Utilities and Commerce, “Energy Efficiency – Measuring for Success”, Energy Institute POWER Conference on Energy Research and Policy (presenter and moderator), U.S. Environmental Protection Agency National Center for Environmental Economics, University of Maryland Agriculture and Resource Economics, NBER Environmental and Energy Economics Program Meeting, Michigan State University Department of Economics, Travers Conference “California’s Energy Future” (moderator), Center for Effective Global Action Evidence to Action Symposium “Promoting Global Development in a Changing Climate”, Haas School of Business Center for Responsible Business “Alliance for Research on Corporate Responsibility Forum” (moderator), Stanford University Department of Economics, Energy Institute, Inter-American Development Bank Workshop at UC Berkeley “Introduction to Impact Evaluation”, Harvard University Kennedy School, “Evaluating the Energy Efficiency Gap” Workshop, Haas School of Business Faculty Lunch, NBER Public Economics Program Meeting (discussant)

2012: NBER Industrial Organization Program Meeting (discussant), University of California at Santa Barbara Occasional Conference in Environmental Economics, California Energy Commission, Energy Institute POWER Conference on Energy Research and Policy, Brookings Institution (presenter), Energy Institute, Hamilton Project Forum at Stanford University “New Directions for U.S. Energy Policy”, Lawrence Berkeley National Laboratory Environmental Energy Technologies Division Seminar, Inter-American Development Bank Summer Workshop “Environment in Latin America”, University of Arizona Department of Economics, Energy Institute Energy Policy Conference on Rate Design, Behavior, Energy & Climate Change Conference, Program on Energy and Sustainable Development Conference “The New U.S. Role in Fossil Fuel Markets”

2011: American Economic Association Annual Meeting (discussant), Massachusetts Institute of Technology Department of Economics, Energy Institute POWER Conference on Energy Research and Policy (moderator), Climate One “Nuclear Power: Setting Sun?” at San Francisco’s Commonwealth Club, NBER Joint Public Economics and Environmental and Energy Economics Program Meeting (co-organizer), University of Tennessee Department of Economics, Brookings Institute Economic Studies, University of California Energy Institute, University of Colorado Department of Economics, University of California Davis Department of Economics, World Affairs Council “Powering America: Does Nuclear Have a Future?” (moderator), NBER Annual East Asian Seminar on Economics (presenter and discussant), University of California Energy Institute, NBER Summer Institute, Stanford Institute for Theoretical Economics, Berkeley Energy and Resources Collaborative Symposium, Energy Institute Nuclear Power Conference (presenter and moderator), University of Chicago Harris School of Public Policy, Kellogg School of Management, Stanford Graduate School of Business

2010: NBER Environmental and Energy Economics Program Meeting (discussant), Energy Institute POWER Conference on Energy Research and Policy (discussant), NBER Design and Implementation of U.S. Climate Policy Conference (presenter and discussant), Georgia State University Department of Economics, University of California Los Angeles Department of Economics, University of California Energy Institute, NBER Summer Institute (discussant), University of British Columbia Conference on Environmental Economics, UC Santa Cruz Department of Economics, University of California Santa Barbara Occasional Workshop on

Environmental and Resource Economics, Stanford University Department of Economics

2009: American Economic Association Annual Meeting (discussant), University of California San Diego Department of Economics, Washington University Olin Business School, University of California Berkeley Haas School of Business, University of California Energy Institute POWER Conference on Energy Research and Policy, Tufts University Department of Economics, NBER Environmental and Energy Economics Program Meeting, Cornell University Department of Applied Economics and Management, Massachusetts Institute of Technology Center for Energy and Environmental Policy Research Spring Workshop, University of California Energy Institute, University of California Berkeley Department of Economics, University of California Santa Barbara Occasional Workshop on Environmental and Resource Economics, University of California Santa Barbara Department of Economics, New York University Stern School of Business, University of Illinois College of Business, University of California Berkeley Green Buildings Conference, RAND Labor and Population Seminar, California Energy Commission

2008: American Economic Association Annual Meeting (discussant), University of Calgary Department of Economics, NBER Joint Industrial Organization and Environmental and Energy Economics Program Meeting (discussant), Wharton School of the University of Pennsylvania, Resources for the Future, University of Chicago Harris School of Public Policy, University of Michigan Department of Economics, Stanford University Department of Economics, Association of Environmental and Resource Economists Annual Summer Meeting, NBER Summer Institute (discussant), Boston University Department of Economics, Columbia University Department of Economics, Georgetown University Department of Economics, Yale University Department of Economics, Harvard University Kennedy School of Government, Massachusetts Institute of Technology Department of Economics, Stanford Graduate School of Business, Arizona State Department of Economics

2007: American Economic Association Annual Meeting (discussant), Duke University Department of Economics, University of Michigan Department of Economics, University of Western Ontario Department of Economics, University of Maryland Department of Agricultural and Resource Economics, University of California Energy Institute, Harvard University Kennedy School of Government, Massachusetts Institute of Technology Center for Energy and Environmental Policy Research Spring Workshop

Before 2007: NBER Summer Institute, University of California Energy Institute, HEC Montreal, University of Michigan Department of Economics, Michigan State University Department of Economics, Harvard University Department of Economics, University of Chicago Graduate School of Business, Stanford University Department of Economics, Columbia University Department of Economics, Wharton School of the University of Pennsylvania, Boston University Department of Economics, Brown University Department of Economics, University of Maryland Department of Economics, Princeton University Department of Economics, Cornell University Department of Economics, University of Chicago Department of Economics, University of Michigan Department of Economics, University of Rochester Department of Economics

Ph.D. Dissertations Advised

Leila Safavi, Agricultural and Resource Economics, 2024, UC Berkeley
Anna Brockway, Energy and Resources Group, 2022, UC Berkeley
Molly Sears, Agricultural and Resource Economics, 2022, UC Berkeley
Shelley He, Agricultural and Resource Economics, 2022, UC Berkeley
Leopold Biardeau, Agricultural and Resource Economics, 2020, UC Berkeley
Dina Gorenshteyn, Agricultural and Resource Economics, 2019, UC Berkeley
Matt Woerman, Agricultural and Resource Economics, 2019, UC Berkeley
Ellen Lan Lin, Agricultural and Resource Economics, 2019, UC Berkeley
Josh Blonz, Ph.D. Agricultural and Resource Economics, 2017, UC Berkeley
Walter Graf, Ph.D. Agricultural and Resource Economics, 2016, UC Berkeley
Tom Beckford, Ph.D. Economics, 2016, UC Berkeley
Judson Boomhower, Ph.D. Agricultural and Resource Economics, 2015, UC Berkeley
Charalampos Andreades, Ph.D. Nuclear Engineering, 2015, UC Berkeley
Nicholas Lam, Ph.D., Environmental Health Sciences, 2014, UC Berkeley
Catie Hausman, Ph.D. Agricultural and Resource Economics 2013, UC Berkeley
Leslie Martin, Ph.D. Agricultural and Resource Economics 2012, UC Berkeley
T.I. Tongil Kim, Ph.D. Marketing 2012, UC Berkeley-Haas
Alan Fuchs, Ph.D. Agricultural and Resource Economics 2011, UC Berkeley
Bryan Hong, Ph.D. Business and Public Policy 2011, UC Berkeley-Haas
Ginger Carls, Ph.D. Economics 2009, University of Michigan
Soren Anderson, Ph.D. Economics 2008, University of Michigan (co-chair)
Ron Alquist, Ph.D. Economics 2008, University of Michigan.
Paul Edelstein, Ph.D. Economics 2007, University of Michigan
Yimin Liu, Ph.D. School of Natural Resources 2006, University of Michigan
Martin Heintzeman, Ph.D. Economics 2005, University of Michigan