Christopher Malloy

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North Hall 2015, University of California, Santa Barbara, CA, 93106 | Citizenship: U.S.

Fields of Interest: Energy Economics, Environmental Economics, Public Economics, Law and Economics

Education

Ph.D., Economics — *Santa Barbara, CA*

University of California, Santa Barbara — Expected June 2023

Dissertation Committee: Olivier Deschênes (chair), Peter Kuhn, and Alisa Tazhitdinova.

M.A., Economics — *Santa Barbara, CA*

University of California, Santa Barbara — June 2018

M.A., Economics — *Denver, CO*

University of Colorado-Denver — June 2017

B.S., Economics — *St. Paul, MN*

University of St. Thomas — June 2015

Honors: Summa Cum Laude, Aquinas Scholar

Working Papers (Abstracts at End)

[1] **[Job Market Paper] The Precautionary Consequences of Wildfire Liability: Evidence from Power Shutoffs in California**

[2] **Causal Effects of Renewable Portfolio Standards on Renewable Investments and Generation: The Role of Heterogeneity and Dynamics** (with Olivier Deschênes and Gavin McDonald) **[Under Review]**

[3] **Can the Low-Carbon Transition Energize Labor Markets? Evidence from Wind Electricity Investments in the U.S.** (with Olivier Deschênes)

[4] **Equitable Low-Carbon Transition Pathways for California's Oil Extraction** (with Ranjit Deshmukh, Paige Weber, Olivier Deschênes, David Lea, Kyle Meng, Danae Hernandez Cortes, Tia Kordell, Ruiwen Lee, Tracey Mangin, Measrainsey Meng, Sandy Sum, Vincent Thivierge, and Anagha Uppal) **[Revisions requested at Nature Energy]**

Policy Work

Enhancing Equity While Eliminating Emissions in California's Supply of Transportation Fuels

(PIs: Olivier Deschênes, Ranjit Deshmukh, David Lea, Kyle Meng, and Paige Weber).

Research Experience

Graduate Student Researcher — *Environmental Markets Lab*

University of California, Santa Barbara — March 2021–June 2022

Project: The Labor Market Implications of Renewable Energy Policies. *PI:* Olivier Deschênes.

Graduate Student Researcher — *Environmental Markets Lab*

University of California, Santa Barbara — March 2020–December 2020

Project: California Carbon Neutrality Study 2. *PIs:* Olivier Deschênes, Ranjit Deshmukh, David Lea, Kyle Meng, and Paige Weber.

Research Assistant — *Bren School*

University of California, Santa Barbara — January–December 2019

PI: Kelsey Jack.

Teaching Experience

University of California, Santa Barbara — *Economics Department*

Teaching Associate (Instructor of Record) — Fall 2019–Winter 2020

Undergraduate Financial Management. **Average rating 2 (1=highest, 5=lowest, Department average=2.5)*

University of California, Santa Barbara *Economics Department*

Teaching Assistant Fall 2017–Present

Undergraduate Introductory Econometrics (2 quarters) Upper Level Econometrics (1 quarter), Financial Management (2 quarters), Intermediate Microeconomics (2 quarters), Introductory Macroeconomics (2 quarters). **Average rating 1.4 (1=highest, 5=lowest, Department average=2)*

Presentations

2022 Western Economic Association International Annual Conference, Graduate Student Workshop.
2022 Association of Environmental and Resource Economists Summer Conference.
2022 Camp Resources XXVII.
2022 Southern California Graduate Conference in Applied Economics.
2022 UCSB Consortium for Applied Research in Economics Seminar.

Workshops Attended

2022 Occasional Workshop in Environmental and Resource Economics.
2019 The Berkeley/Sloan Summer School in Environmental Economics.

Service

Co-Chair, Graduate Student Mentorship Program

Economics Department. University of California, Santa Barbara. 2019–2021

Graduate Student Mentor

Economics Department. University of California, Santa Barbara. 2019

Awards and Honors

2022 **Fellowship**: Job Market Fellowship. Economics Department, UC Santa Barbara.
2021 **Award**: UCSB Economics Department Prize for Scholarship, Teaching, Contributions to the Department.
2019 **Fellowship**: Graduate Research Fellowship, UC Santa Barbara

Technical Skills

Programming (Advanced): Stata, R, Python. (Basic): Linux, Matlab
Drawing & Typesetting LaTeX, Beamer, MS Office

References

- **Olivier Deschênes** (advisor)
  Professor
  Department of Economics
  University of California, Santa Barbara
  olivier@econ.ucsb.edu
- **Peter Kuhn**
  Distinguished Professor
  Department of Economics
  University of California, Santa Barbara
  peter.kuhn@ucsb.edu
- **Alisa Tazhitdinova**
  Assistant Professor
  Department of Economics
  University of California, Santa Barbara
  tazhitda@ucsb.edu

Additional Contacts

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  Professor Erik Eyster
  Department of Economics
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- **Placement Administrator**
  Mark Patterson
  Department of Economics
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Abstracts

[Job Market Paper] The Precautionary Consequences of Wildfire Liability: Evidence from Power Shutoffs in California

Across all sectors of the U.S. economy, regulators use liability regulations to encourage firms to take actions that reduce the costs associated with low probability, high severity events such as oil spills and production defects. Despite the widespread use of these regulations, there is limited evidence of their effectiveness in influencing firms' tradeoff between expected liability cost and incentives for precautions. This study provides causal evidence of firm responses to the entire distribution of potential liability and quantifies the distribution of liability costs between firms and the public by studying power line-ignited fires in California's electric utility sector. In this setting, when a power line-ignited fire damages a structure, the owner of the power line assumes the cost. Using exogenous variation in the replacement cost of structures that lie downwind of power lines, I find that firms increase their precaution by 130% in response to a $680 million increase in liability. In the short run, the estimates from this study imply that the implemented liability regulation had welfare costs up to $7 billion.

Causal Effects of Renewable Portfolio Standards on Renewable Investments and Generation: The Role of Heterogeneity and Dynamics (with Olivier Deschênes and Gavin McDonald) [Under Review]

Despite a 30-year long history, Renewable Portfolio Standards (RPS) remain controversial and debates continue to surround their efficacy in leading the low-carbon transition in the electricity sector. Contributing to the ongoing debates is the lack of definitive causal evidence on their impact on investments in renewable capacity and generation. This paper provides the most detailed analysis to date of the impact of RPSs on renewable electricity capacity investments and generation. We use state-level data from 1990-2019 and recent econometric methods designed to address dynamic and heterogeneous treatment effects in a staggered adoption panel data design. We find that, on average, RPS policies increase wind generation capacity by 600-700 MW, a 21% increase, but have no significant effect on investments in solar capacity. Additionally, we demonstrate that RPSs have slow dynamic effects: most of the capacity additions occur 5 years after RPS implementation. Estimates for wind and solar electricity generation mimic those for capacity investments. We also examine the possibility of policy spillover where the introduction of an RPS in one state leads to a change in capacity mix in the neighboring states, but find no systematic evidence for such spillovers.

Can the Low-Carbon Transition Energize Labor Markets? Evidence from Wind Electricity Investments in the U.S. (with Olivier Deschênes)

Most western countries have made commitments or enacted policies aiming to transform their economies to become carbon-neutral by 2050. Many of the proposed policies to reduce carbon emissions are also promoted as engines of job creation and local economic development. While low-carbon transition policies continue to be debated and proposed, none have been implemented for a long enough period of time to permit an empirical evaluation of their impact. This paper uses the natural experiment provided by the rapid deployment of wind electricity projects in the United States over the period 2000-2019 to shed light on whether the low-carbon transition can deliver long-lasting and high-quality jobs. We compile detailed data on the location and operation date of 55,000 wind turbines, combined with county-level data on employment and earnings to estimate the impact of wind projects on employment rates and earnings. Our research design uses two-way fixed effects regression, stacked difference in differences (Cengiz et al. 2019), and the doubly robust estimator proposed by Callaway and Sant'Anna (2021). The empirical analysis points to a small, but durable positive effect of wind electricity investments on local labor market outcomes. Overall, the results suggest that the deployment of 100 GW of wind electricity production capacity over the last two decades created close to 150,000 jobs.