



Morgan R. Edwards

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EDUCATION

Massachusetts Institute of Technology , Ph.D. Data, Systems, and Society	2017
Massachusetts Institute of Technology , S.M. Technology and Policy	2013
University of North Carolina at Chapel Hill , B.S. Environmental Science, Economics	2010

ACADEMIC AND RESEARCH POSITIONS

Assistant Professor of Public Affairs , University of Wisconsin Madison <i>Affiliations with the Nelson Institute for Environmental Studies, Center for Sustainability and the Global Environment (SAGE), Energy Analysis and Policy Program (EAP), and Holtz Center for Science and Technology Studies</i>	2020-
President's Postdoctoral Fellow , University of Maryland <i>Affiliated fellow at the Joint Global Change Research Institute (JGCRI) at the Pacific Northwest National Laboratory (PNNL)</i>	2018-2020
Postdoctoral Associate , Massachusetts Institute of Technology	2017-2018
Graduate Research Assistant , Massachusetts Institute of Technology	2011-2017
Research Assistant , University of North Carolina at Chapel Hill	2010-2011

PEER-REVIEWED PUBLICATIONS

- Edwards**, Cui, **Bindl**, Hultman, **Mathur**, McJeon, Iyer, Song, and Zhao, "Quantifying the regional stranded asset risks from new coal plants under 1.5°C," in review at *Nature Climate Change*.
- Edwards** and Trancik, "Consequences of equivalency metric design for energy transitions and climate change," revise and resubmit at *Climatic Change*.
- Edwards**, Giang, Macey, Magavi, Nicholas, Ackley, and Schulman, "Repair failures call for new policies to tackle leaky natural gas distribution systems," *Environmental Science & Technology*, 2021.
- Cui, Hultman, Jiang, Cui, McJeon, Yu, **Edwards**, Sen, Song, Bowman, Clarke, Kang, Lou, Yang, Zhang, Zhu, "A plant-by-plant strategy for high-ambition coal phaseout in China," *Nature Communications*, 2021.
- Klemun†, **Edwards**†, Trancik, "Research priorities for supporting subnational climate policies," *WIREs Climate Change*, 2020.

Hultman, Clarke, Frisch, Kennedy, McJeon, Cyr, Hansel, Bodnar, Manion, **Edwards**, et al., “Fusing subnational with national climate action is central to term decarbonization: The case of the United States,” *Nature Communications*, 2020.

Cui, Hultman, **Edwards**, He, Sen, Surana, McJeon, Iyer, Patel, Yu, Nace, Shearer, “A plant-by-plant assessment of coal retirement needs under the Paris Agreement,” *Nature Communications*, 2019.

Edwards†, Klemun†, Kim, Wallington, Tamor, and Trancik. “Vehicle emissions of short- and long-lived climate forcers: Trends and tradeoffs,” *Faraday Discussions*, 2017.

Edwards, McNerney, and Trancik. “Testing emissions equivalency metrics against climate policy goals,” *Environmental Science and Policy*, 2016.

Roy, **Edwards**, and Trancik. “Methane mitigation timelines to inform energy technology evaluation,” *Environmental Research Letters*, 2015.

Edwards and Trancik. “Climate impacts of energy technologies depend on emissions timing,” *Nature Climate Change*, 2014.

† Authors contributed equally.

OTHER PUBLICATIONS

Blumsack, Hines, Moore, Trancik, Azevedo, Araujo, Bent, Brown, Cather, **Edwards**, et al, “The Energy Transition in New Mexico: Insights from a Santa Fe Institute Workshop,” 2020.

Cui, Song, Hultman, Cui, **Edwards**, and McJeon. Implications of Continued Coal Builds in the 14th Five-Year Plan of China. *Technical Report*, 2020.

Cui, Hultman, McJeon, Yu, Cui, **Edwards**, Sen, Song, Jiang. A plant-by-plant assessment of accelerated coal power phase-out in China under the Paris climate goals. *Technical Report*, 2019.

Cui, **Edwards**, Bowman, and Hultman. Coal’s emission shadow: Meeting climate goals requires cancelling all proposed coal power plants and accelerating the retirement of existing fleets, *Policy Brief*, 2019.

Hultman, Frisch, Clarke, Kennedy, Bodnar, Hansel, Cyr, Manion, **Edwards**, et al. Accelerating America’s Pledge: Going All-In to Build a Prosperous, Sustainable Economy for the United States, *Technical Report*, 2019.

Edwards, Surana, Thomas, and Williams. “Accelerating climate-mitigating technology development and deployment,” *Technical Report*, 2019.

Trancik, Klemun, and **Edwards**. “People are worried Trump will stop climate progress. The numbers say he can’t.” *Washington Post*, November 2016.

Trancik, Brown, Jean, Kavlak, Klemun, **Edwards**, McNerney, Miotti, Mueller, and Needell, Technology improvement and emissions reductions as mutually reinforcing efforts: Observations from the global development of solar and wind energy, *Technical Report*, 2015.

HONORS AND AWARDS

Madison Teaching and Learning Excellence Fellowship	2021-
University of Maryland President's Postdoctoral Fellowship	2018-2020
Siebel Scholarship	2016
Society of Industrial Ecology Young Professionals Scholarship	2015, 2017
Best Presentation, TMP Graduate Consortium	2015
Martin Family Sustainability Fellowship	2015-2016
NSF Graduate Research Fellowship	2013-2016
Best Thesis Nominee, MIT Technology and Policy Program	2013
MIT Presidential Fellowship	2011-2012
Best Teaching Assistant, Introductory Economics	2010
Bill Glaze Award	2009
William Richardson Davie Scholarship	2006-2010

RESEARCH GRANTS

Alfred P. Sloan Foundation, "Are Companies Investing in Energy and Climate Innovation for Long-Term Societal Benefits?" Co-Lead with Kavita Surana, 2021-2023.

Holtz Center Thematic Cluster Grant, "Policymaking in Times of Post-Normal Science: Considering Community-Based Distributed Energy," Collaborator, 2020-2022.

RESEARCH MENTORSHIP

Lew Blank, MPA Student in Public Affairs	2021-
Zachary Thomas, MS/PhD Student in Environment and Resources	2021-
Matilyn Bindl, MS/PhD Student in Environment and Resources	2020-
Krinjal Mathur, MPA Student in Public Affairs	2020-2021
Ava Waitz, Undergraduate Research Assistant (MIT)	2017-2021
Caitlin Keegan, Undergraduate Research Assistant (MIT)	2017
Ethan McGarrigle, Undergraduate Research Assistant (MIT)	2016

Thesis Committees: Ciaran Gallagher (MS/PhD E&R), Gesangyangi (PhD E&R), Nicholas Mailloux (MS & PhD E&R), Clara Jackson (MS E&R), Lauren Reeg (MS E&R)

Academic Advisor: Jenna Green, Henry Hundt, William Keenan

TEACHING

Public Affairs 881: Cost-Benefit Analysis	Fall 2020, 2021
Public Affairs 240: Evidence-Based Policymaking	Spring 2021

INVITED TALKS AND WORKSHOPS

Advancing Methods for Modeling Systems to inform Sustainability Science, Workshop Hosted by MIT, Harvard, and University of British Columbia, 2021.

Paths to Deep Decarbonization of the Power Grid, Workshop Hosted by the Santa Fe Institute,

2020.

Climate policy and calculation in natural gas distribution systems. Invited Talk at the University of British Columbia, 2019.

Accelerating Climate-Mitigating Technology Development and Deployment, Workshop Hosted by the University of Maryland, 2018.

SELECTED CONFERENCE PRESENTATIONS

Edwards, Cui, Hultman, and McJeon, “Tracking the changing stranded asset risks from existing and planned coal power plants,” American Geophysical Union, 2020.

Edwards, Mathur, Giang, Macey, Magavi, Nicholas, Schulman, Shen, Qui, Liu, “Equitably managing fossil fuel infrastructure during low-carbon energy transitions,” INFORMS, 2020.

Edwards, Giang, Macey, Magavi, Nicholas, and Schulman. “Co-developing tools to assess leak repairs in natural gas distribution systems,” American Geophysical Union, 2019.

Edwards and Trancik. “Designing emissions equivalency metrics for energy systems transitions.” Gordon Research Conference in Industrial Ecology, 2018.

Edwards and Trancik. “Design criteria and performance of emissions equivalency metrics.” International Society for Industrial Ecology/International Symposium on Sustainable Systems and Technologies Joint Conference, 2017.

Edwards and Trancik. “Performance criteria for the design of emissions equivalency metrics.” Gordon Research Conference in Industrial Ecology, 2016.

Edwards, McNerney, and Trancik. “Performance of greenhouse gas equivalency metrics under an uncertain climate future.” International Society for Industrial Ecology Biennial Conference, 2015.

Edwards, McNerney, and Trancik. “Metrics for evaluating the climate impacts of energy technology CH₄ emissions.” Technology, Management, and Policy Graduate Consortium, 2015.

Edwards and Trancik. “Emissions metrics for evaluating alternative transportation fuels against changing climate constraints.” International Society for Industrial Ecology Biennial Conference, 2013.

Edwards and Trancik. “Revised emissions factors to evaluate alternative transportation fuels against a changing background climate.” International Symposium on Sustainable Systems and Technologies, 2013.

Edwards. “Quantitative Approaches to Roadmap Development: Lessons Learned from U.S. Energy Efficiency Metrics.” XII International Academic Conference on Economic and Social Development, 2010.

Edwards. “American Recovery and Reinvestment Act: Metrics for Evaluating Energy Efficiency Investments.” Sustainable Energy Conference and Workshop, 2010.

PROFESSIONAL SERVICE

Co-Organizer, AGU Session on Transdisciplinary Climate Education	2020, 2021
Co-Organizer, AGU Session on Systemic Modeling Advances	2020, 2021
Co-Organizer, La Follette Climate Policy Forum	2020-2021
Co-Chair, Gordon Research Seminar on Industrial Ecology	2018
Content Team, MIT Energy Conference	2012
Lead Organizer, Sustainable Energy Conference, UNC Chapel Hill	2011

Memberships: American Geophysical Union (AGU), International Society for Industrial Ecology (ISIE), Association for Public Policy Analysis and Management (APPAM)