

VALERIE J. KARPLUS

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Carnegie Mellon University
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EMPLOYMENT

Professor (with Tenure), Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA (July 2023 –)

Associate Director, Wilton E. Scott Institute for Energy Innovation, Carnegie Mellon University, Pittsburgh, PA (August 2023 –) (served as **Acting Director** August 2023 – December 2023)

Associate Professor (with Tenure), Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA (Sept 2020 – June 2023)

Assistant Professor, Global Economics and Management Group, Sloan School of Management, Massachusetts Institute of Technology, Cambridge, MA (July 2014 – August 2020)

Visiting Assistant Professor, Management Science and Engineering, Stanford University, Palo Alto, CA (January – June 2017)

Co-Director, China Energy and Climate Project (July 2011 – May 2016) / Research Scientist, MIT Joint Program on the Science and Policy of Global Change (July 2011 – June 2014), Massachusetts Institute of Technology, Cambridge, MA

Research Associate, National Institute of Biological Sciences, Beijing, China (2005-2006)

Fellow, Robert Bosch Fellowship Program, worked at the German Federal Foreign Office (Berlin, Germany) and KfW Development Bank (Frankfurt, Germany) (2004-2005)

California Institute of Technology, Research Technician, Björkman Lab (2003-2024)

Luce Scholar, Luce Scholars Program, China Agricultural University, Beijing, China (2002-2003)

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA, Ph.D., Engineering Systems Division (Technology, Management, and Policy), June 2011.

Massachusetts Institute of Technology, Cambridge, MA, M.S., Technology and Policy and Civil and Environmental Engineering, June 2008.

Yale University, New Haven, CT, B.S., Molecular Biophysics and Biochemistry and Political Science, May 2002.

LANGUAGES

English (native), German (fluent), Mandarin Chinese (fluent)

AWARDS

MIT Excellence Award for Serving Our Community (2020), Clean Energy, Education, and Empowerment Education Award (2019), Top 40 Management Professors Under 40 (Poets and Quants), Pyke Johnson Paper Award (2012), USAEE/IAEE Student Paper Award (2010), EPA STAR Graduate Fellowship (2010), Martin Family Fellowship for Sustainable Development Professionals (2009-2010), Atlantik-Brücke e.V. Young Leader (2008), Robert Bosch Fellowship (2004-2005), Luce Scholars Program (2002-2003)

TEACHING

Frontiers in Iron and Steelmaking (CMU, Fall 2023)
Accelerating Low Carbon Transition in Industry (CMU, Fall 2022, Fall 2024)
Introduction to the Theory and Practice of Policy Analysis (CMU, Fall 2021-2024)
Global Strategy and Organization (MIT, Spring 2014, Fall 2014)
New Models for Global Business (MIT, Fall 2015)
Entrepreneurship without Borders (MIT, Fall 2014, Fall 2015)
China Lab (MIT, Spring 2018, Spring 2019, Spring 2020)
India Lab (MIT, Spring 2018, Spring 2019, Spring 2020)
Global Energy: Politics, Markets, and Policies (MIT, Spring 2018, Spring 2019, Spring 2020)
Mentor for Global Entrepreneurship Lab, China Lab, Global Organizations Lab (MIT, 2015-2018)
TA for Applications of Technology in Energy and the Environment (MIT, Fall 2007)
Various short courses on energy, climate change, transportation, and microeconomics (MIT)
MIT Sloan Executive Education, Advanced Management Program
Peking University HSBC Business School MBA Program

PEER-REVIEWED RESEARCH (4,723 citations, h-index: 36, i10-index: 70 as of January 2025)

*** Author is or was a graduate student, postdoctoral associate, or visiting scholar I advised or co-advised.*

****Slusarewicz, J.H., Karplus, V.J., and Muller, N.Z. (2025).** Relating patterns of scrubber operation in U.S. coal power plants to air quality and health outcomes. (In Preparation).

****Park, E., Rausch, S., and Karplus, V.J. (2025).** The Welfare Effects of Carbon Border Adjustment Mechanisms in the United States and European Union. (In Preparation).

Karplus, V.J., Muller, N.Z., and ****Slusarewicz, J.H. (2025).** Electricity rate structure and SO₂ emissions at U.S. coal power plants. (In Preparation).

****Moore, E.J., Karplus, V.J., and Morgan, G.M. (2025).** What is driving development of carbon dioxide (CO₂) sequestration sites in the United States? (In Preparation).

****Hoffmann, E.S., **Kammerer, S., Karplus, V.J., Pistorius, P.C., Rehtanz, C. (2025).** Drivers of the relative costs and emissions of different direct reduced iron technologies. (In Preparation).

****Hoffmann, E.S., Karplus, V.J., Pistorius, P.C. (2025).** Understanding operational heterogeneity in blast furnace CO₂ emissions. (In Preparation).

****Slusarewicz, J.H. and Karplus, V.J. (2025).** Changes in the temporal targeting of the U.S. National Ambient Air Quality Standards (NAAQS) for SO₂ reduce average and peak emissions from coal power plants. *Environmental Science & Technology* (In Revision).

****Jordan, K., Jaramillo, P., Karplus, V.J., Adams, P.J., and Muller, N.Z. (2025).** The role of hydrogen in decarbonizing iron and steel production. *Environmental Science & Technology* (In Revision).

****Miles, J., Combemale, C., Karplus, V.J., and Pistorius, P.C. (2024).** Simulating Regional Workforce Impacts of Decarbonizing Integrated Steelmaking, *PNAS* (In Revision).

****Zhang, D. and Karplus, V.J. (2025).** Management Practices and Manufacturing Firm Responses to a Randomized Energy Audit. *Nature Energy* (Accepted).

- Peng, H., Qu, C., Karplus, V.J., Zhang, D. (2025). The C-REM 4.0 model: A CGE model for provincial analysis of China's carbon neutrality target. *Energy and Climate Management*, 1(1), 9400006.
- Sievert, K. Song, Y., Chen, Y. and Karplus, V.J. (2024). Expanding renewable electricity use in global corporate supply chains. *Environmental Research: Energy*, 1(3), 033001.
- Karplus, V.J., **Jacob, I., **Moore, E.J. Morgan, G.M. (2024). Risks in the design of regional hydrogen hub systems: A review and commentary. *Risk Analysis*, 17449.
- **Hoffmann, E., Karplus, V.J., and Fuchs, E.R.H. (2024). Complete and Accurate? The Role of Profit Orientation in the Production of Public Health Data, *Business & Society* (Special Issue).
- **Cheng, A.L., Fuchs, E.R.H., Karplus, V.J., Michalek, J.J. Electric vehicle battery chemistry affects supply chain disruption vulnerabilities. (2024). *Nature Communications*, 15(1):2143
- **Moore, E.J., Karplus, V.J., and Morgan, G.M. (2023). Expert elicitation of the timing and uncertainty to establish a geologic sequestration well for CO₂ in the United States. *Proceedings of the National Academy of Sciences*, 121 (1) e2307984120.
- Karplus, V.J. and **Wu, M. (2023). Dynamic responses of coal power plant SO₂ emissions to China's environmental inspections. *Proceedings of the National Academy of Sciences*. 120(17) e2214262120.
- Meckling, J. and Karplus, V.J. (2023). How politics can enable climate and sustainability solutions. *Nature Sustainability*. 6, 742–751.
- **Reolfi, R., Fuchs E.R.H., and Karplus, V.J. (2023). Anticipating Workforce Impacts of a Low-Carbon Energy Transition for the Vehicle Service Workforce. *Environmental Research Letters*, 18(3) 1002.
- **Davidson, M.D., Karplus, V.J., Lewis, J.I., Nahm, J., Wang, A. (2022). Risks of decoupling from China on low-carbon technologies. *Science*, 377(6612), 1266-1269.
- **Steffen, B., Karplus, V., Schmidt, T. (2022). State ownership and technology adoption: The case of electric utilities and renewable energy. *Research Policy*, 51(6), 104534.
- **Davidson, M., Karplus, V., Zhang, D., Zhang, X. (2021). Policies and Institutions to Support Carbon Neutrality in China by 2060. *Economics of Energy and Environmental Policy* (Tenth Anniversary Edition), 10(2).
- Karplus, V.J., Zhang, J., and Zhao, J. (2021). Navigating and Evaluating the Labyrinth of Environmental Regulation in China. *Review of Economics and Environmental Policy*, 15(2), 300-322.
- Karplus, V.J., **Geissmann, T., and **Zhang, D. (2021). Institutional complexity, management practices, and firm productivity. *World Development*, 142(C).
- **Qiu, M., Weng, Y., Cao, J., Selin, N.E., and Karplus, V.J. (2020). Improving Evaluation of Energy Policies with Multiple Goals: Comparing Ex Ante and Ex Post Approaches. *Environmental Science and Technology*, 54(24), 15584–15593.
- **Mulvaney, K., Selin, N., Giang, A., Muntean, M., **Li, C.-T., **Zhang, D., Angot, H., Thackray, C., and Karplus, V.J. (2020). Mercury Benefits of Climate Policy in China: Addressing the Paris Agreement and the Minamata Convention Simultaneously. *Environmental Science and Technology*, 54(3), 1326–1335

- Filippini, M., **Geissmann, T., Karplus, V.J., and Zhang, D. (2020). The Productivity Impacts of Energy Efficiency Programs in Developing Countries: Evidence from China. *China Economic Review*, 59, 101364.
- Karplus, V.J., **Shen, X., and **Zhang, D. (2020). Herding cats: Firm-level performance in China's industrial energy conservation program. *Energy Journal*, 41(4).
- **Li, M., Zhang, D., **Li, C.-T., Selin, N., Karplus, V. (2019). Co-benefits of China's climate policy for air quality and human health in China and transboundary regions in 2030. *Environmental Research Letters*, 14(8), 804006.
- **Singh, A., Winchester, N., and Karplus, V.J. (2019). Evaluating India's Climate Targets: The Implications of Economy-Wide and Sector-Specific Policies. *Climate Change Economics*, 10(3), 1950009.
- **Zhang, D., **Zhang, Q., Qi, S., Huang, J., Zhang, X., and Karplus, V. (2019). Integrity of firm emissions reporting in China's early carbon markets. *Nature Climate Change*, 9, 164-169.
- **Helveston, J.P., Wang, Y., Karplus, V.J., and Fuchs, E.R.H. (2019). Institutional Complementarities: The Origins of Experimentation in China's Plug-in Electric Vehicle Industry. *Research Policy* 48(1), 206-222.
- Karplus, V.J., Zhang, S., & Almond, D. (2018). Quantifying coal power plant responses to tighter SO₂ emissions standards in China, *Proceedings of the National Academy of Sciences*, 115(27) 7004-7009.
- **Li, M., **Zhang, D., **Li, C.-T., Mulvaney, K., Selin, N.E., and Karplus, V.J. (2018). Air Quality Co-benefits of Carbon Pricing in China. *Nature Climate Change*, 8(5), 398-403.
- Karplus, V.J., & Zhang, X. (2018). Incentivizing firm compliance with China's national emissions trading system. *Economics of Energy & Environmental Policy*, 6(2), 73-86.
- **Kwon, S.Y., N.E. Selin, A. Giang, V.J. Karplus and D. Zhang (2018). Present and Future Mercury Concentrations in Chinese Rice: Insights From Modeling. *Global Biogeochemical Cycles*, 32(3): 437-462.
- Wong, C. and Karplus, V.J. (2017). China's War on Air Pollution: Can Existing Governance Structures Support New Ambitions? *The China Quarterly*, 1-23.
- **Kishimoto, P.N., Karplus, V.J., Zhong, M., Saikawa, E., **Zhang, D., & Zhang, X. (2017). The impact of coordinated policies on air pollution emissions from road transportation in China. *Transportation Research Part D: Transport and Environment*, 54, 30-49.
- **Luo, X., **Zhang, D., Caron, J., Zhang, X.L., Karplus, V.J. (2016). Dynamic Effects of Interprovincial Migration on the Stringency of Energy Policy in China. *Energy Economics*, 58, 164-173.
- **Davidson, M., **Zhang, D., Xiong, W., Zhang, X., and Karplus, V.J. (2016). Modelling the potential for wind energy integration on China's coal-heavy electricity grid. *Nature Energy*, 1, 1-7.
- Karplus, V.J., Rausch, S., and **Zhang, D. (2016). Energy Caps: Alternative Climate Policy Instruments for China? *Energy Economics*, 56, 422-431.
- Zhang, X., Karplus, V.J., **Qi, T., **Zhang, D., and He, J. (2016). CO₂ Emissions in China: How Far Can New Efforts Bend the Curve? *Energy Economics*, 54, 388-395.
- **Zhang, D., **Springmann, M., and Karplus, V.J. (2015). Equity and Emissions Trading in China. *Climatic Change*, 134, 131-146.

- Karplus, V.J., **Kishimoto, P., and Paltsev, S. (2015). The Global Energy, CO₂ Emissions and Economic Impact of Vehicle Fuel Economy Standards. *Journal of Transport Economics and Policy*, 49(4), 517-538.
- **Springmann, M., **Zhang, D., and Karplus, V.J. (2015). Consumption-Based Adjustment of Emissions-Intensity Targets: An Economic Analysis for China's Provinces. *Environmental and Resource Economics*, 61(4), 615-640.
- Cao, J. and Karplus, V.J. (2014). Firm-Level Determinants of Energy and Carbon Intensity in China. *Energy Policy*, 75, 167-178.
- **Zhang, D., Karplus, V.J., Cassisa, C., & Zhang, X. (2014). Emissions Trading in China: Progress and Prospects. *Energy Policy*, 75, 9-16.
- **Qi, T., Winchester, N., Karplus, V.J., and Zhang, X. (2014). Will Economic Restructuring in China Reduce Trade-embodied CO₂ Emissions? *Energy Economics*, 42, 204-212.
- **Qi, T., Zhang, X., and Karplus, V.J. (2014). The Energy and CO₂ Emissions Impact of Renewable Energy Development in China. *Energy Policy*, 68, 60-69.
- **Nam, K.-M., **Waugh, C.J., Paltsev, S., Reilly, J.M. and Karplus, V.J., (2014). Synergy between Pollution and Carbon Emissions Control: Comparing China and the U.S. *Energy Economics*, 46, 186-201.
- Rausch, S. & Karplus, V.J. (2014). Markets vs. Regulation: The Efficiency and Distributional Impacts of U.S. Climate Policy Proposals. *Energy Journal*, 35(S1), 199-227.
- Karplus, V.J., Paltsev, S., Babiker, M., & Reilly, J.M. (2013). Should a Vehicle Fuel Economy Standard be Combined with an Economy-wide Greenhouse Gas Emissions Constraint? Implications for Energy and Climate Policy in the United States. *Energy Economics*, 36, 322-333.
- Karplus, V.J., Paltsev, S., Babiker, M., & Reilly, J.M. (2013). Applying Engineering and Fleet Detail to Represent Passenger Vehicle Transport in a Computable General Equilibrium Model. *Economic Modelling*, 30, 295-305.
- **Nam, K.-M., **Waugh, C., Paltsev, S., Reilly, J., & Karplus, V.J. (2013). Carbon Co-benefits of Tighter SO₂ and NO_x Regulations in China. *Global Environmental Change*, 23(6), 1648-1661.
- **Zhang, D., Rausch, S., Zhang, X., & Karplus, V.J. (2013). Quantifying Regional Economic Impacts of CO₂ Intensity Targets in China. *Energy Economics*, 40, 687-701.
- Karplus, V.J. and Paltsev, S. (2012). Proposed Vehicle Fuel Economy Standards in the United States for 2017 to 2025: Impacts on the Economy, Energy, and Greenhouse Gas Emissions. *Transportation Research Record*, 2287, 132-139. (Winner of the Pyke Johnson Best Paper Award.)
- Paltsev, S., Morris, J., Cai, Y., Karplus, V.J., & Jacoby, H. (2012). The Role of China in Mitigating Climate Change. *Energy Economics*, 34(S3), S444-S450.
- Karplus, V.J., Paltsev, S., & Reilly, J. M. (2010). Prospects for Plug-in Hybrid Electric Vehicles in the United States and Japan: A General Equilibrium Analysis. *Transportation Research Part A*, 44(8), 620-641.
- Sandoval, R., Karplus, V.J., Paltsev, S., & Reilly, J. M. (2009). Modeling Prospects for Hydrogen Powered Transportation Through 2100. *Journal of Transport Economics and Policy*, 43(3), 291-316.

Chen, H., Karplus, V.J., Ma, H., & Deng, X.W. (2006). Plant biology research comes of age in China. *The Plant Cell*, 18(11), 2855-2864.

SELECTED BOOKS, CHAPTERS, & OTHER PUBLICATIONS

Karplus, V.J., Xue, L., Morgan, M.G., He, K., Victor, D.G., Zhang, S.-N. (2024). How to sustain scientific collaboration amid worsening US-China relations. *Nature*, 637(8046), 545-547.

Karplus, V.J. and M. Granger Morgan, (2024). Moving Beyond Hype on Hydrogen. *Issues in Science and Technology*, 44(4).

Foster, D., Karplus, V.J., Colcord, C., Cooley, K., Ullama, D. (2024). Iron and Steel Decarbonization by 2050: An Opportunity for Workers and Communities. [LINK](#)

Jaramillo, P., Karplus, V.J., Pistorius, P.C., Severnini, E.R. (2023). *The Costs and Distributional Impacts of Decarbonizing the Iron and Steel Industry in the United States*. NBER Working Paper for The Economics of Decarbonizing Industrial Production. Cambridge, MA.

**Miles, J.M., Combemale, C., Karplus, V.J. (2023). When the Energy Transition Comes to Town. *Issues in Science and Technology*, 40(1).

Curtis, S., Gallagher, D., He, Y., Karplus, V., Kenderdine, M., Nabahe, S., Ulama, D., Whitney, O. (2022). Accelerating an Equitable Clean Energy Transition in New Mexico. Roosevelt Project Case Study. [LINK](#)

Ansolabehere, S., Araújo, K., He, Y., Hu, A., Karplus, V., Li, H., Thom, E., Tingley, D. (2022). A Low Carbon Energy Transition in Southwestern Pennsylvania. Roosevelt Project Case Study. [LINK](#)

Karplus, V.J. and Morgan, G.M. (2021). Upgrade the science and technology policy system the U.S. already has. *Nature*, 600(7890), 606.

Karplus, V.J., Morgan, G.M., and Victor, D.G. (2021). Finding Safe Zones for Science, *Issues in Science and Technology*, 38(1).

**Hoffmann, E., Karplus, V.J., and Fuchs, E.R.H. (2021, 20 October). Universities Should Set the Standard in COVID-19 Data Reporting. *Issues in Science and Technology*.

Michalek, J.J. and Karplus, V.J. Choosing Electric Vehicle Policies With Care (Discussion). (2021). *Issues in Science and Technology*.

Grover, A. and Karplus, V.J. (2021). Are better managed firms more pandemic-resilient? Brookings Commentary. [LINK](#)

Grover, A. and Karplus, V.J. (2020). Coping with COVID-19: Does Management Make Firms More Resilient? World Bank Policy Research Working Paper 9514. [LINK](#)

Grover, A. and Karplus, V.J. (2020). The Energy-Management Nexus in Firms Which Practices Matter, How Much and for Whom? World Bank Policy Research Working Paper 9397. [LINK](#)

Karplus, V.J., Kearney, M., and **Pawar, S. (2020). Fostering Innovative Growth in Regions Exposed to Low Carbon Transition. [LINK](#)

Fuchs, E.R.H., Karplus, V.J., Kalathil, N., and Morgan, G.M. (2020, 18 December). To Respond to the Pandemic, the Government Needs Better Data on Domestic Companies That Make Critical Medical Supplies. *Issues in Science and Technology*.

Karplus, V.J., Lessard, D.R., **Rajpurkar, N., and **Singh, A. (2019). Institutional enablers of energy system transition: Lessons from solar PV in eight African countries. Book chapter for *Achieving Collective Ends with Limited Resources: Africa's Struggle to Bridge the Infrastructure Gap*.

Jotzo, F., Karplus, V.J., Grubb, M., Löschel, A., Neuhoff, K., Wu, L., & Teng, F. (2018). China's emissions trading takes steps towards big ambitions. *Nature Climate Change*, 8(4), 265–267.

Karplus, V.J. (2018). Institutions and Emissions Trading in China. *American Economic Review: Papers and Proceedings*, 108, 468-472.

Jenkins, J. and Karplus, V.J. (2017). Carbon Pricing under Political Constraints: Insights for Accelerating Clean Energy Transitions. In *The Political Economy of Clean Energy Transitions*. Chapter 3. Oxford University Press.

**Davidson, M., Karhl, F., and Karplus, V.J. (2017). Towards a Political Economy Framework for Wind Power Does China Break the Mould? In *The Political Economy of Clean Energy Transitions*. Chapter 13. Oxford University Press.

Karplus, V.J. and Zhang, X.L. (2016). 空气污染和气候变化的双控策略 (Coordinated Policy Strategies for Air Pollution and Climate Change, in Chinese), Annual Review of Low Carbon Development in China (Chapter 10).

Karplus, V.J. (2015). Double Impact: Why China Needs Coordinated Air Quality and Climate Strategies (in English and Chinese). Energy and Environmental Paper Series. Chicago, IL: Paulson Institute.

Karplus, V.J. (2013, July 26). Policy: Carbon emissions in China's trade. *Nature Climate Change*, 3, 703–704.

Karplus, V.J. (2014). China. In Castle, D., Phillips, P., and Smith, S., *Handbook on Agriculture, Biotechnology, and Development*, Chapter 4. Edward Elgar.

Karplus, V.J. (2012, Feb. 22). The case for a higher gasoline tax. *New York Times*, A23. [LINK](#)

Heywood, J.B. and Karplus, V.J. (2009, Aug. 22). Electric vehicles aren't the solution—yet (Editorial). *The Boston Globe*, A9.

Karplus, V.J. and Deng, X.W. (2008). *Agricultural Biotechnology in China: Origins and Prospects*, New York, NY: Springer.

Karplus, V.J. (2005, April 1). HIV/AIDS in China: Bewertung des Problems/mögliche deutscher Beitrag zur HIV/AIDS Bekämpfung. (In German) Report for the State Minister for Europe and State Minister for External Affairs of the German Federal Foreign Office, Berlin, Germany.

FUNDRAISING

Principal Investigator

Appalachian Regional Commission, Data-Driven Approaches to Support Workforce Skills Matching and Resilient Careers in Appalachia (\$500,000) Co-PI: Christophe Combemale	2024-present
Consortium of Sponsors, Clean Energy Sourcing Research Initiative, "Initiative on Low Carbon Energy Transition in Supply Chains" (\$1,180,000)	2021-present
NSF Engines: Type-1: Resilient Energy Technology and Infrastructure (RETI) Consortium (\$120,000)	2024-present
NSF PIRE: Deeply Decarbonizing Global Industrial Supply Chains: Technology, Organizational Practices, and Institutional Design (\$1,499,635) Co-PIs: Paulina Jaramillo, Chris Pistorius, and Edson Severnini	2023-present
Toyota Research Institute, Realizing the Potential of U.S. Electric Vehicle Battery Supply Chain Investments (\$100,000) Co-PI: Christophe Combemale	2023-2024
Henry L. Hillman Foundation decarb@CMU Workforce and Community Impacts of Clean Energy Transition (\$500,000) Co-PI: Rick Stafford, Heinz College	2022-present

Block Center Seed Grant “Jobs in an Appalachian Clean Energy Transition: A Regional Skills-Matching Approach to Inform Policy” (\$34,000) Co-PI: Rick Stafford, Heinz College	2022-2023
DOE EIA Cooperative Agreement (\$750,000)	2013-2018
MIT Energy Initiative Seed Grant (\$150,000)	2017
Tata Fellowship (Support for graduate fellow at \$125,000 plus \$25,000)	2016
Samuel Tak Lee Real Estate Entrepreneurship Laboratory Seed Grant (\$130,000)	2015
China Energy and Climate Project (\$2,500,000 over 5 years, funded by a consortium of Eni, the French Development Agency, ICF International, and Shell)	2011-2016
Eni (“New Business Models for Renewables in Sub-Saharan Africa,” Co-PI: Don Lessard, \$125,000)	2014

Co-Principal Investigator

Evaluating Performance of Electrolytic Iron for Steelmaking in an Electric Arc Furnace (\$1,100,000) PI: Chris Pistorius	<i>Awarded</i>
Low-Temperature Green Ironmaking from Unconventional Feedstocks (\$347,220) PI: Chris Pistorius	2025-present
Technical Development and Industrial Demonstration of Net-Zero Carbon EAF Steelmaking with Alternative Injection and Stirring Technologies (\$757,651) PI: Chris Pistorius	2025-present
U.S. DOE Scaling Hydrogen-Direct Reduced Iron Pathways to Decarbonize Iron and Steelmaking (\$3,469,435) PI: Chris Pistorius	2023-present
Toyota Research Institute (“Assessment of Potential Drivers of, and Impediments to the Wide Adoption of Affordable Emission-Free Hydrogen,” PI: Granger Morgan, \$180,000)	2021-2022
CIT Moonshot (\$1.32 million, PI: Erica Fuchs)	2021
Block Center Seed Grant (\$60,000, PI: Erica Fuchs)	2020
MITEI Curriculum Development Grant (\$199,261, PI: Chris Warshaw)	2015
J-WAFS Seed Grant (\$200,000, PI: Noelle Selin)	2015
Environmental Solutions Initiative Seed Grant (\$306,137, PI: Noelle Selin)	2015
Energy Foundation (“Integrated Assessment of Emissions, Air Quality, Economic, and Health Impacts of Transport Policies in China,” (\$150,000, PI: Prof. Eri Saikawa, Emory University)	2013

CONSULTING

Asia Development Bank	
Review ADB report on air quality/climate change mitigation in the Beijing-Tianjin-Hebei region	2020
World Bank	
Finance, Competitiveness, and Innovation Global Practice	
Research project co-lead, Energy Management and Firm Performance	2020
Chevron, San Ramon, California	
Focus on energy trends in emerging markets	2011-2022
Organisation for Economic Cooperation and Development (OECD), Paris, France	
Report: <i>The Potential of Biotechnology to Adapt Crops to Climate Change</i>	2010

GOVERNMENT COMMITTEES

- NASEM Subcommittee on U.S-China Scientific Engagement (2021-present)
- U.S. Global Change Research Program (USGCRP) Advisory Committee (2021-2024)

PROFESSIONAL SOCIETIES & EDITORIAL ROLES

- Transportation Research Board
- Energy Committee (2011-2019)
- International Trade and Transport Committee (2013-2019)
- American Economic Association (2011-present)
- Association for Environmental and Resource Economics (2012-present)
- International Association of Energy Economics (2010-present)

Review Boards

Center for Climate and Energy Decision Making, Carnegie Mellon University, Advisory Committee (2016-2020)
China National Renewable Energy Center (CNREC), Advisory Board Member (2015-2018)

Editorial Boards

Editor, Economics of Energy and Environmental Policy,
International Association of Energy Economics (2017-2022)

Reviewed for *Journal of Political Economy*, *Management Science*, *American Economic Journal: Economic Policy*, *Journal of Public Economics*, *Climate Policy*, *Energy Policy*, *Journal of International Economics*, *Nature Climate Change*, *Nature Energy*, *Nature Sustainability*, *Proceedings of the National Academy of Sciences*, *Transportation Research Part A*, *Science*, *Strategic Management Journal*, *Transportation Research Record*, *Journal of the Association of Environmental and Resource Economics*, *Energy Economics*, *Energy Efficiency*, *Energy Journal*, *Research Policy*