

ROBYN C. MEEKS

Sanford School of Public Policy, Duke University
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RESEARCH INTERESTS

Environmental and energy economics; development economics; and economics of the household

PROFESSIONAL APPOINTMENTS

- 2017 – present Duke University, Sanford School of Public Policy. *Assistant Professor*.
Faculty Affiliate: Duke University Energy Initiative; Energy Access Project;
Duke Center for International Development (DCID); DevLab @ Duke.
- 2012 – 2017 University of Michigan, School of Natural Resources and Environment.
Assistant Professor in Environmental Economics
University of Michigan, Program in the Environment. Center for Russian,
Eastern European, & Eurasian Studies; African Studies Center. *Faculty
Associate*.
- 2016 – 2018 International Centre for Integrated Mountain Development (ICIMOD).
Kathmandu, Nepal. *Visiting Scientist*.
- Fall 2016 University of Chicago, Energy Policy Institute of Chicago. *Visiting Scholar*.

EDUCATION

Harvard University, Kennedy School of Government, PhD in Public Policy, 2012
Research fields: Development Economics, Environmental Economics
Dissertation: “Essays on the Economics of Household Water Access in Developing Countries”

Yale University, School of Forestry and Environmental Studies, Masters in Environmental
Management, 2005

Brown University, Bachelor of Arts, Political Science, 2000

SELECT ACADEMIC PAPERS

Working Papers

- “Cleaning Up the Rust Belt: Housing Market Impacts of Removing Legacy Pollutants” (A. Cassidy, R. Meeks, and M. Moore), 2021. *R&R: Journal of Public Economics*.

- “Breaking the culture of non-payment: A qualitative analysis of utility intervention Project Sarbulandi in Karachi Electric, Pakistan” (Husnain Ahmad, Ayesha Ali, Robyn Meeks, Victoria Plutshack, Zhenxuan Wang, Javed Younas). 2021. *R&R: Energy Policy*.
- “Impacts of Electricity Quality Improvements: Experimental Evidence on Infrastructure Investments” (R. Meeks, R. Isaev, A. Omuraliev, and Z. Wang), 2021. *Submitted and under review*.
- “Reducing Information Barriers to Solar Adoption: Experimental Evidence from India” (M. Mahadevan, R. Meeks, and T. Yamano). 2021. *Submitted and under review*.
- “Electrification and Manufacturing: Evidence from Microhydro in Nepal” (R. Meeks, H. Thompson, Z. Wang), 2020. *Submitted and under review*.
- “Improving Infrastructure Reliability with Smart Technology: Evidence from the Electricity Sector in Texas” (R. Meeks, J. Pless and Z. Wang). *Working paper*.
- “Resiliency and Electricity Services: Understanding the Role of Infrastructure Improvements and Institutional Innovations in Pakistan” (H. Ahmad, A. Ali, R. Meeks, V. Plutshack, Z. Wang, J. Younas). *Working paper*.
- “Mini-grid Sustainability and the Role of Metering” (D. Bhattarai, R. Meeks, S. Oh, D. Patino-Echeverri, S. Pattanayak, E. Wibbels), 2022. *Working paper*.
- “Price Perception and Electricity Demand with Nonlinear Tariffs” (S. McRae and R. Meeks), 2016. *Working paper*.

Peer-Reviewed Publications

- “Rethinking Energy Efficiency in the Developing World” (M. Fowlie and R. Meeks). 2021. *Review of Environmental Economics and Policy*. Summer.
- “Energy Efficiency and Electricity Reliability” (E. Carranza and R. Meeks). 2021. *Review of Economics and Statistics*. 103(3): 461-475.
- “Waste Not: Can Biogas Deliver Sustainable Development?” (R. Meeks, K. Sims, and H. Thompson), 2019. *Environmental and Resource Economics*. 72(3)
- “Property Rights and Household Access to Water Sources: Evidence from a Land Titling Program in Rural Peru,” 2018. *World Development*, 102: 345-357.
- “Water Works: The Economic Impact of Water Infrastructure.” 2017. *Journal of Human Resources*, 52(4).
 - Harvard Environmental Economics Program Enel Endowment Prize, Best Doctoral Paper (2012).
- “Is Water Security Necessary? An Empirical Analysis of the Effects of Climate Hazards on National Level Economic Growth” (C. Brown, R. Meeks, Y.B. Ghile, and K. Hunu). 2013. *Philosophical Transactions A*, Water Security Special Issue, 371(202).
- “Willingness to Pay for Cleaner Water in Less Developed Countries: Systematic Review of Experimental Evidence” (C. Null, J.G. Hombrados, M. Kremer, R. Meeks, E. Miguel, and A. P. Zwane). 2012. *International Initiative for Impact Evaluation Systematic Review* 006.

- “Hydroclimatic risk to economic growth in Sub-Saharan Africa” (C. Brown, R. Meeks, K. Hunu, and W. Yu). 2011. *Climatic Change* 106(4): 621-647.

RESEARCH IN PROGRESS

- “Load Disaggregation Using Smart Meter Data in Developing Countries” (with G. Kamyabjou and J. X. Johnson). *Paper forthcoming*.
- “Smart Meters and Electricity Services: Evidence from India, Nepal, Tajikistan, and Uzbekistan” (with M. Pradhananga, M. Mahadevan, T.Yamano). *Baseline survey in Kathmandu complete*.
- “Power Systems and COVID 19 in Kyrgyzstan: Evidence on the Role of Smart Metering” (with R. Isaev and A. Omuraliev). *Survey of electricity utility employees complete*.
- “Off-Grid Energy Access in Benin” (with M. Jeuland).
- “Information and behavioral approaches to reduce electricity theft and pollution from electricity provision in Pakistan” (with A. Ali, J. Younas, H. Ahmad, Z. Wang).

BLOGS, PODCASTS, WEBINARS, AND SELECT REPORTS

- Webinar: “Does energy access promote economic growth? A look at the evidence,” October 13, 2021. (Panelist with Dana Kassem, Kenneth Lee, Clark Miller, and Maarten Voors). [Energy and Economic Growth Webinar Series](#).
- “The Microeconomics of Energy Access: Foundations for Energy Data Analytics,” September 17, 2021. [Energy Initiative YouTube channel](#).
- “Energy efficiency and electricity reliability: Externality impacts of compact fluorescent lamps” (Eliana Carranza and Robyn Meeks), *VoxDev*, May 17, 2021. <https://voxddev.org/topic/energy-environment/energy-efficiency-and-electricity-reliability-externality-impacts-compact-fluorescent-lamps>
- “Can Technology Help Save Developing World Utilities in the Wake of COVID-19?” *Nicholas Institute Policy in the Pandemic Series*, (Jonathan Phillips, Dr. Robyn Meeks, and Dr. Victoria Plutshack), October 26, 2020. <https://nicholasinstitute.duke.edu/articles/can-technology-help-save-developing-world-utilities-wake-covid-19>
- “The Reliability-Adjusted Cost of Electricity (RACE): A new metric for the fight against energy poverty” (2019) <https://www.energyforgrowth.org/wp-content/uploads/2019/10/RACE-Proposal-for-a-New-Energy-Metric-Final.pdf> (contributor with The Energy for Growth Hub).
- “A Small Green Idea to Power Rural Nepal” *Duke Ways and Means Podcast*, S4 Episode 3. March 20, 2019. <https://waysandmeansshow.org/2019/03/20/s4e3-a-green-idea-to-power-rural-nepal/>
- “An Empirical Analysis of the Effects of Climate Variables on National Level Economic Growth” (C. Brown, R. Meeks, Y. Ghile, and K. Hunu), 2010. World Bank Policy Research

Working Paper and Background paper for World Bank World Development Report.

<https://doi.org/10.1596/1813-9450-5357>

- “Overview Report on the Experience of International Financial Institutions and International Funds in Investing in Climate Change Mitigation in Developing Countries” (B. Gentry, R. Meeks, G. Walker, and S. Wallander), November 2005. Background paper for the report of the Secretariat of the UN Framework Convention on Climate Change (UNFCCC), FCCC/SBI/2005/INF.7.

RESEARCH SUPPORT

- 2021 MIT Abdul Latif Jameel Poverty Action Lab (J-PAL). King Climate Action Initiative (K-CAI).
PI: “Information and behavioral approaches to reduce electricity theft and pollution from electricity provision in Pakistan” (\$150,000) (Co-PIs: Ayesha Ali and Javed Younas).
- 2020 Energy for Economic Growth (EEG)
PI: “Power Systems and COVID 19 in the Developing World: Understanding the Role of Metering and Infrastructure Improvements in Power System Resilience in Kyrgyzstan and Pakistan” (£77,660)
- 2019 Duke Energy Initiative Research Seed Fund
PI: “Understanding Mini-grid Infrastructure Sustainability in Nepal” (\$30,700) (Co-PIs: Dalia Patino-Echeverri, Subhrendu Pattanayak, Erik Wibbels)
- Michigan Sea Grant
Co-PI: “Restoration Economics: Effects of Area-of-Concern Remediation on Residential Housing Prices and Neighborhood Demographic” Characteristic” (\$20,00) (PI: Michael Moore)
- 2018 Millennium Challenge Corporation (MCC)
Co-PI: “MCC Benin II Off-Grid Energy Access Project Evaluation.” (\$1.8 million) (PI: Marc Jeuland)
- Asian Development Bank (ADB)
PI: “Reducing Roof-top Solar Power Supply Delivery Costs in India.” (\$268,681)
- Duke Energy Initiative Research Seed Fund
PI: “Understanding Mini-grid Infrastructure Sustainability in Nepal.” (\$39,000) (Co-PIs: Dalia Patino-Echeverri, Subhrendu Pattanayak, Erik Wibbels)

- Sanford Pilot Funding Program.
PI: "Institutions for Well Maintenance in Rural Uganda" (\$14,000)(Co-PIs: R. Guiteras and A. Harris)
- 2017 International Growth Centre (IGC)
PI: "The impacts of smart meters on losses in electricity distribution, electricity reliability, and household investments in energy efficiency" (£39,186)
- Great Lakes Commission
Co-PI: "Determining the Impact of Protecting and Restoring the Great Lakes" (\$40,214) (PI: Michael Moore)
- 2016 Michigan Sea Grant
Co-investigator: "Restoration Economics: Effects of Area-of-Concern Remediation on Residential Housing Prices and Neighborhood Demographic Characteristic" (\$224,835) (PI: Michael Moore)
- McIntire-Stennis Research Program
Co-PI: "Incentives or Information? Supporting stronger public-private forest management partnerships" (\$87,431) (PI: Arun Agrawal)
- 2015 Michigan Institute for Teaching and Research in Economics (MITRE)
PI: "Household Responses to Energy Price Reforms in Kyrgyzstan" (\$9,107) (co-PI: Shaun McRae)
- University of Michigan Office of Research Faculty Grant
PI: "Household Responses to Energy Price Reforms in Kyrgyzstan" (\$9,108) (co-PI: Shaun McRae)
- University of Michigan, Transforming Learning for a Third Century
Co-PI (with 18 others): Transforming Sustainability Education and Case-Based Teaching (\$1,595,749) (PIs: Arun Agrawal and Rebecca Hardin)
- Weiser Center Faculty Grant
PI: "Household Responses to Energy Price Reforms in Kyrgyzstan" (\$4,000)
- ADVANCE Elizabeth Caroline Crosby Award (\$13,815)
- 2013 Univ. of Michigan OVPR Faculty Research Grant
PI: "Estimating the impacts of a block electricity tariff on adoption of energy efficient technologies" (\$10,000)
- 2012 Weiser Center Faculty Grant

PI: “Local Public Goods and Motivating Take-up of Energy Efficient Technologies” (\$1,500)

- 2011 National Science Foundation (NSF) Social, Behavioral, and Economics Doctoral Dissertation Research Improvement Grant (SES-1061989)
Co-PI: “Economics of a Lightbulb” (\$19,900) (PI: Sendhil Mullainathan)
- 2010 Davis Center for Russian and Eurasian Studies Research Grant (\$4,000)
- 2009 Center for International Development Research Grant (\$3,000)

HONORS AND FELLOWSHIPS RECEIVED

- 2012 Harvard Enel Endowment Prize
- 2011 - 2012 Harvard University Dissertation Completion Fellowship
- 2009 - 2010 Taubman Center for State and Local Government Dissertation Fellowship
- 2009 - 2012 Sustainability Science Program, Doctoral Fellow
- 2008 - 2009 Harvard Sustainability Science Program Giorgio Ruffolo Fellowship
- 2007 - 2008 Crump Fellowship for Environment and Natural Resource Management
- 2007 Norberg-Bohm Fellowship for Science, Technology and Public Policy
- 2006 - 2012 Harvard Environmental Economics Program, Doctoral Fellow
- 2006 - 2008 Harvard Kennedy School Pre-doctoral Fellowship
- 2005 - 2006 Fulbright U.S. Student Fellowship, Kyrgyz Republic
- 2004 - 2005 Foreign Language and Area Studies (FLAS) Scholarship, Russian language
- 2005 Hixon Center Research Fellowship
- 2004 Yale Carpenter-Sperry Mellon Award (Yale)

TEACHING PERFORMED

- Graduate: *Duke University:*
Pub Pol 590S/ENERGY 590S Impact Evaluation: Energy and Development (Spring 2019, Spring 2020);
Pub Pol 813 Quantitative Evaluation Methods (Spring 2019, Spring 2020; Spring 2021, Spring 2022, Sections 01 and 02)
- University of Michigan:*

NRE 501.059A Environment and Development I: Impact Evaluation Methods (2013, 2015, 2016, 2017);

NRE 501.059B Environment and Development II: Impact Evaluation Applications (2015, 2016, 2017);

Harvard University:

Environmental and Resource Economics and Policy (Teaching Fellow for Professor Robert Stavins) (2011).

Undergraduate: *Duke University:*

Pub Pol 303D.002 Microeconomics Policy Tools (Fall 2017);

Bass Connections, Course on Mapping Electricity Infrastructure in Developing Countries (Team Contributor) (2018-2019, 2019-2020)

University of Michigan:

ENVIRON 235 Economics of Natural Resources and Environment (2013, 2015, and 2016).

PRESENTATIONS

- 2022 AEA Annual Conference;
- 2021 University of California – Davis, Agricultural and Resource Economics; University of Virginia, Batten School; Energy for Economic Growth (EEG) Webinar on Energy and Productive Uses; MIT Applied Energy Symposium; Wake Forest University; NBER, Summer Institute: IT and Digitization; SETI Annual Conference;
- 2020 Energy and Economic Growth Programme (EEG) Grid Reliability and Utility Operations Conference. Accra, Ghana; Pacific Conference For Development Economics (PACDEV), UC Berkeley, Berkeley, CA; LSE Imperial College Workshop in Environmental Economics, London School of Economics, London, England; NBER Summer Institute, Energy and Environmental Economics (EEE). Cambridge, MA; NC State University, Agricultural and Resource Economics. Raleigh, NC. ETH Zürich, Series of Webinars in Environmental and Energy Economics and Policy (SWEEEP). Zürich, Switzerland. University of British Columbia.
- 2019 Sustainable Energy Transitions Initiative (SETI) Conference. Santiago, Chile; AERE Annual Conference. Incline Village, NV; Kyrgyz Research Institute for Energy and Economics. Bishkek, Kyrgyz Republic. Advances in Field

- Experiments (AFE) Conference. Chicago, IL; Harvard Environmental Economics Program (HEEP) Workshop. Cambridge, MA.
- 2018 World Congress of Environmental and Resource Economists (WCERE). Gothenburg, Sweden; University of Pennsylvania. Philadelphia, PA; Oklahoma University. Norman, OK; Duke Development Conference. Durham, NC;
- 2017 NBER Summer Institute, Energy and Environmental Economics (EEE). Cambridge, MA; World Bank, Applied Microeconomics Seminar. Washington, DC; Duke University Sanford School of Public Policy. Durham, NC; University of Michigan Department of Civil and Environmental Engineering. Ann Arbor, MI; Harvard University, Harvard Environment Economics Program (HEEP). Cambridge, MA; Sustainable Energy Transitions Initiative (SETI) Workshop. Durham, NC; UCSB Energy and Environmental Economics Occasional Workshop. Santa Barbara, CA;
- 2016 AEA Annual Meetings. San Francisco, CA; UC Berkeley Energy Institute, Berkeley, CA; NBER Spring Meeting. Cambridge, MA; Midwest Energy Fest at Northwestern University; Sustainability Science Symposium at Harvard University; AERE Annual Conference. Breckenridge, CO; Nepal Alternative Energy Promotion Center. Kathmandu, Nepal; International Centre for Integrated Mountain Development (ICIMOD) Kathmandu, Nepal; NBER Summer Institute – Energy and Environmental Economics. Cambridge, MA; Advances in Field Experiments (AFE) Conference at the University of Chicago; Energy for Economic Growth – South Asia Workshop. Kathmandu, Nepal; University of Chicago – Energy Policy Institute (EPIC). Chicago, IL; Heartland Conference at the University of Illinois;
- 2015 NEUDC at Brown University; Occasional Environmental Economics Workshop at University of California, Santa Barbara; Heartland Conference at the University of Illinois; AERE Annual Conference. San Diego, CA;
- 2014 Northeastern University; Erb Institute at the University of Michigan; AAEA Annual Meeting. Minneapolis, MN; Harvard Environmental Economics Program Research Workshop; APPAM Annual Meeting; Heartland Conference at the University of Illinois;
- 2013 AEA Annual Meetings (discussant for session on environment and health). San Diego, CA; Michigan State University, Dept. of Agricultural, Food, and Resource Economics; Midwest International Economic Development Conference (MWIEDC) at University of Wisconsin – Madison; New England Universities Development Conference (NEUDC) at Dartmouth College;
- 2012 Association for Public Policy and Management (APPAM) Annual Research Conference (discussant for session on water and development); CU

Environmental and Resource Economics; University of Michigan, School of Natural Resources and Environment; RAND; International Water Management Institute (Delhi); University of South Carolina; University of Hawaii;

2009-2011 Harvard Development Economics Seminar; NEUDC at Yale University; Harvard Environmental Economics Program seminar; Sustainability Science Program; Campbell Collaboration Colloquium (Norway).

PROFESSIONAL ACTIVITIES / SERVICE

Association Member: American Economic Association (AEA) (2011- present)
Association of Environmental and Resource Economists (AERE) (2011 – present)
Agricultural & Applied Economics Association (AAEA) (2014 – 2016)
Association of Public Policy Analysis and Management (2012 – 2014)

Advisor: Research coach for International Growth Centre (IGC) - DevLab Series, coaching researchers based in low-income countries on grant proposal writing (August 2021; October 2021)

Working Group advising The Energy for Growth Hub in developing a new energy poverty metric: Reliability-Adjusted Cost of Electricity (RACE) (2019) <https://www.energyforgrowth.org/wp-content/uploads/2019/10/RACE-Proposal-for-a-New-Energy-Metric-Final.pdf>

Affiliations: Environment for Development (EfD), *Affiliated faculty*;
Sustainable Energy Transitions Initiative (SETI), *Affiliated faculty*;
MIT Jameel Poverty Action Lab (J-PAL), *Invited Researcher*.

Journal Reviewer: American Economic Review; Quarterly Journal of Economics; American Economic Journal: Applied Economics; Journal of Public Economics; Journal of Development Economics; American Journal of Agricultural Economics; American Economic Journal: Economic Policy; Economic Journal; Energy Journal; Energy Policy; Economic Development and Cultural Change; Environment and Development Economics; Journal of Economic Behavior & Organization; Journal of Environmental Economics and Management; Journal of the Association of Environmental and Resource Economists; Journal of Human Resources; Resource and Energy Economics; Review of Economics and Statistics; World Development.

Grant & Conference Reviewer: AERE Annual Conference Papers; World Congress of Environmental and Resource Economics (WCERE) Conference Papers; International Initiative for Impact Evaluation (3ie) grant review; South Asian Network for Development and Environment Economists (SANDEE) grant review.

SERVICE TO UNIVERSITY

Duke University Sanford School of Public Policy

- Training, certificate completed, “Dismantling Racism at Duke,” (January 2021)
- Training, “TransForming Our Campus: Enhancing classroom inclusion for transgender and non-binary students,” (Fall 2019)
- PhD Admissions committee member, University Program in Environmental Policy (UPEP) (2017-2019)
- Panelist, “Career Success at a Policy School: Women in Academia” (2018)
- Super committee member, Economics Faculty Search (2018, 2019)
- Committee member, Undergraduate Awards (2019)
- Participant, MPP “Statistics Core” curriculum review

Faculty Advisory Committee, Energy Initiative (2017 – present)

- Faculty contributor, Bass Connections course ENERGY 395/795 (2018, 2019, 2020, 2021)
- Webinar, Energy Data Analytics Lab fellows (2021)

Faculty Fellow, Energy Initiative (2017-2020)

- Co-organizer, EI PhD Student Fellows Program (2017- 2020)
- Faculty Advisor, Data+ Project “Algorithms to Detect Electricity Theft” (2019)
- Grant proposal reviewer, EI Pilot grants program (2018, 2019, 2020)
- Energy & Environment proposal reviewer, Bass Connections (2017, 2018, 2019, 2020)
- Panelist, Duke Energy Week (2017)

Faculty Affiliate, Energy Access Project (EAP) (2017-)

- Panel leader at EAP launch event, Washington, DC (February 2018)
- Panelist addressing energy access and productive use at EAP convening of academics and policymakers, Washington, DC (February 2019)

- Reviewer, SETI Publication Workshop, Santiago, Chile (May 2019)
- Panelist addressing use of data analytics in energy access at EAP convening of academics and policymakers, Washington, DC (scheduled December 2019)
- Paper discussant, EfD Annual Conference (December 2020)

Examples of Guest Lecturing at Duke:

- PubPol 908: PhD Dissertation Planning Course (Fall 2021)
- ENERGY 395/795: The Business and Policy Landscape for Energy Access in East & Southern Africa (October 2018);
- ENERGY 395/795: Energy Infrastructure Map of the World (September 2018);
- UPEP PhD Seminar (2018);
- ENV 790.03: Clean Energy Finance (November 2017);
- GLEAN luncheon (October 2017);

University of Michigan

University of Michigan Energy and Environmental Economics Seminar Co-Organizer (2015-2016)

SNRE Faculty Search Committee Member, Integrated Assessment Cluster Position (2015, 2016)

SNRE Environmental Policy & Planning Admissions Committee (2013-2017)

Coverdell Peace Corps Scholarship Panel (2015, 2016, 2017)

SNRE Masters Project Proposal Review (2016, 2017)

Weiser Center Post-doctoral Review Committee (2017)

Examples of Guest Lecturer at University of Michigan:

- Weiser Center Seminar (2015);
- PhD-level Development Economics Course (2016);
- Environmental and Water Resource Engineering Course (2017)

OTHER EXPERIENCE

2016-present Asian Development Bank (ADB), Consultant, Impact Evaluation Specialist/Energy Economist.

2007-2009 Innovations for Poverty Action (IPA) and Harvard University, Research Assistant for Professors Rema Hanna and Michael Kremer

2006 Fulbright Program, U.S. Student Fellow in Kyrgyz Republic

2005-2006	UN Development Programme (UNDP) Energy and Environment Group, Consultant
2005	UN Framework Convention on Climate Change (UNFCCC), Consultant
2004	Resources for the Future (RFF), Research Intern
2003-2005	UNDP Public-Private Partnerships for the Urban Environment, Newsletter Editor
2000-2002	Peace Corps Kazakhstan, Environmental Education Volunteer
1996-1999	Brown University Women's Crew Team, Rower (1999 NCAA Division I National Champion Team)