

Appendix

JULY 1, 2023–JUNE 30, 2024



This appendix complements our digital annual report, providing a comprehensive list of our work this academic year.

Publications

The following policy digests and reports were written by faculty, grantees, senior fellows, visiting scholars, and students.

AUGUST 23, 2023

Residential Battery Storage: Reshaping the Way We Do Electricity

Christian Kaps, Assistant Professor, Harvard School of Business

The number of homeowners that buy energy storage is skyrocketing, but installations are often not profitable. Explore why individuals still buy batteries, which households benefit from them, and how valuing greenness helped this technology grow.

SEPTEMBER 21, 2023

Powering the Slum II: Alternative Sources of Energy in Accra's Informal Settlements

Eugénie Birch, Lawrence C. Nussdorf Chair of Urban Research and Education, Weitzman School

James Kwame Mensah, Lecturer, University of Ghana Business School

Accessing clean and efficient energy is a critical challenge for informal settlement dwellers. While renewable energy holds promise, implementation is incipient. This policy digest explores efforts to introduce renewable energy to informal settlements in Accra, Ghana. How are residents responding, and what challenges confront them?

OCTOBER 2, 2023

Improved Cookstoves Halve Air Pollution Peaks, But Ambient Exposure Dampens Health Benefits

Susanna Berkouwer, Assistant Professor of Business Economics & Public Policy, Wharton School

Joshua Dean, Assistant Professor, University of Chicago

Improved cookstoves can cost-effectively reduce emissions, save households up to \$85 per year in charcoal expenditures and reduce peak cooking emissions by 40%. However, this has limited health impacts in contexts with high ambient pollution.

JANUARY 12, 2024

A New Era of Policy in Solar Geoengineering

Shuchi Talati, Founder, The Alliance for Just Deliberation on Solar Geoengineering (DSG)

With climate impacts rising, concerns over our inability to drastically cut emissions and scale up carbon dioxide removal are driving a broader conversation around solar geoengineering. For the first time, the U.S. released a research plan on this emerging technology. This digest explores the state of the field, an overview of the report, and recommendations for how governance and policy can move forward in a just and scientifically robust manner.

FEBRUARY 20, 2024

Coordinated Policy and Targeted Investment for an Orderly and Reliable Energy Transition

Kelli Joseph, Senior Fellow, Kleinman Center

In the U.S., there is no national electricity policy. Reaching nationally defined decarbonization targets in the electricity sector without a national electricity policy while maintaining grid reliability is a growing challenge.

FEBRUARY 21, 2024

Advancing the Social License for Carbon Management in Achieving Net-Zero GHG Emissions

Peter Psarras, *Research Assistant Professor of Chemical Engineering, School of Engineering and Applied Science*

Maxwell Pisciotta, *Student Advisory Council Member, Kleinman Center*

Hélène Pilorgé, *Research Associate, Clean Energy Conversions Lab*

Carbon management is a fast-growing yet polarizing topic. Instead of “yes vs. no,” we suggest the more useful framing of “under what conditions?” This policy digest examines the history of carbon management in U.S. policy and proposes that the establishment of a compelling social license takes a more central position in net-zero governance.

MARCH 20, 2024

Improving Voltage Quality through Transformer Construction in Accra, Ghana

Susanna Berkouwer, *Assistant Professor of Business Economics & Public Policy, Wharton School*

Pierre Biscaye, *Ph.D. Candidate, UC Berkeley*

Maya Mikdash, *Ph.D. Candidate, Texas A&M University*

Steven Puller, *PERC Professor in Free Enterprise, Texas A&M University*

Catherine Wolfram, *William F. Pounds Professor of Energy Economics and Professor of Applied Economics, MIT Sloan School of Management*

We analyze 337 million customer-level reliability and voltage measurements collected from more than 1,000 utility customers over the span of six years and survey data from over 2,000 households and firms in Accra, Ghana, to generate some of the first evidence on the large-scale economic costs of poor voltage quality.



A collection of policy digests and papers published by the Kleinman Center.

MARCH 20, 2024

The Key to Electric Grid Reliability: Modernizing Governance

Alexandra Klass, *James G. Degnan Professor of Law, Michigan Law*

Josh Macey, *Associate Professor of Law, Yale Law School*

Shelley Welton, *Presidential Distinguished Professor of Law and Energy Policy, Kleinman Center and Penn Carey Law*

Hannah Wiseman, *Professor of Law, Penn State University*

The U.S. electric grid is under strain, with extreme weather and blackouts on the rise. Some say the cause is overreliance on renewables like wind and solar. This white paper argues that the primary threat to grid reliability is not the changing energy mix but rather failures in grid governance.

Research Grants

The following research projects, proposed by Penn faculty and doctoral students, were funded through this year's competitive grants program.

The Roles of Household Energy Usage and Ambient Air Pollution in Nairobi

Susanna Berkouwer, *Assistant Professor of Business Economics & Public Policy, Wharton School*

Breaking the Lock on Urban Climate Finance: An Exploration

Eugénie Birch, *Lawrence C. Nussdorf Chair of Urban Research and Education, Weitzman School*

It's Time for a Green Investment Treaty to Incentivize Climate-Aligned Foreign Direct Investment

William Burke-White, *Professor of Law, Carey Law School*

Evaluating K–12 Public School District Sustainability Plans for Climate and Energy Justice

Akira Drake Rodriguez, *Assistant Professor of City Planning, Weitzman School*

How Can We Deploy Solar Fuels in a Decarbonized Society?

Karen Goldberg, *Vagelos Professor of Energy Research*

Walter Johnsen, *Student Advisory Council Member, Kleinman Center*

Thomas Mallouk, *Vagelos Professor in Energy Research*

Mitigating Climate Change Through Investor Activism

Joseph Huang, *Ph.D. Student in Economics, School of Arts and Sciences*

A History of Regenerative Agriculture Practices from the Global South: Case Studies from Ethiopia and Zimbabwe

Thabo Lenneiy, *Managing Director of the Sustainable Agriculture Fund, Kleinman Center*



Researchers collaborating at the Clean Energy Conversions Lab.

How Will Electric Vehicles Influence the Changing Urban Infrastructure and Energy Network?

Zhongjie Lin, *Associate Professor of City and Regional Planning, Weitzman School*

Jing Kang, *Assistant Professor, Waseda University*

Are Those Who Most Benefit from the IRA Aware It Exists? Guidance for Stakeholders and Policymakers

Michael Mann, *Presidential Distinguished Professor in the Department of Earth and Environmental Science*

Heather Kostick, *Administrative Coordinator, Penn Center for Science, Sustainability and the Media*

Contemporary Trends in European Energy Security, Critical Infrastructure Protection, and Russia Energy Sanctions Enforcement

Benjamin Schmitt, *Senior Fellow, Kleinman Center and School of Arts and Sciences*

The Effect of Zero-Emission Vehicle Mandates and Changing Consumer Demand on Automaker Strategies and Sales

Arthur van Benthem, *Associate Professor of Business Economics and Public Policy, Wharton School*



Commentary

The following insights, timely opinion pieces, were posted by faculty, senior fellows, students, and alumni.

JULY 6, 2023

How Much Green Pressure Do Oil Companies Feel from Financial Markets?

Arthur van Benthem, Associate Professor of Business Economics and Public Policy, Wharton School

JULY 7, 2024

Distributed Energy Resources: How Utilities Have Stared Death in the Face and Emerged Victorious

James Tonrey, Undergraduate Seminar Fellow, Kleinman Center

JULY 10, 2023

King Coal

Dhruva Nistane, Undergraduate Seminar Fellow, Kleinman Center

JULY 12, 2023

Is a Carbon-Free World by 2050 a Guarantee or a Pipe Dream? An Analysis

Derek He, 2023 Kleinman Apollo Fellow, Kleinman Center

JULY 12, 2023

Can Nuclear Power and Coal Plant Communities Bail Each Other Out?

Joshua Chertok, Student Advisory Council Member, Kleinman Center

JULY 13, 2023

Rethinking Research Laboratories

Linda Lin, Undergraduate Seminar Fellow, Kleinman Center

JULY 28, 2023

Shedding the Load: Power Shortages Widen Divides in South Africa

Arwen Kozak, Research Associate, Kleinman Center

AUGUST 7, 2023

Debating Carbon Capture, Utilization, and Storage

Carly Kessler, Research Assistant, Kleinman Center

AUGUST 22, 2023

Grid Reliability in the Decarbonization Era

CeCe Coffey, Student Advisory Council Member, Kleinman Center

AUGUST 28, 2023

Reducing Methane Emissions Requires Intensive Data Integration

Grace Dai, Computational Biology, School of Arts and Sciences

OCTOBER 4, 2023

Decarbonizing Cities: Singapore Announces Sustainable Policies at the World Cities Summit in Seoul

Joey Jung, Urban Studies and Political Science, School of Arts and Sciences

OCTOBER 24, 2023

The Calculus on Direct Air Capture

Peter Psarras, Research Assistant Professor of Chemical Engineering, School of Engineering and Applied Science

OCTOBER 27, 2023

Grounding Carbon Management with Geoscientists

Estrella Beroff, Lab Manager, Clean Energy Conversions Lab

NOVEMBER 2, 2023

The Sky Isn't Falling

Peter Psarras, Research Assistant Professor of Chemical Engineering, School of Engineering and Applied Science

NOVEMBER 8, 2023

Environmental Justice via Industrial Policy

Shelley Welton, Presidential Distinguished Professor of Law and Energy Policy, Kleinman Center and Penn Carey Law

NOVEMBER 17, 2023

Navigating the Path to a Sustainable Energy Future: Lessons from REFS 2023

James Dohm, *MBA Candidate, Wharton School*

NOVEMBER 30, 2023

Fifth National Climate Assessment Emphasizes Mitigation

CeCe Coffey, *Student Advisory Council Member, Kleinman Center*

DECEMBER 6, 2023

Sincerity is Subject to Proof: Global Methane Pledges, Markets, and Regulations

John Quigley, *Senior Fellow, Kleinman Center*

DECEMBER 8, 2023

Article 6.4 of the Paris Agreement has Potential, if Countries Make the Most of It

Arwen Kozak, *Research Associate, Kleinman Center*

Angela Pachon, *Research Director, Kleinman Center*

Oscar Serpell, *Associate Director of Academic Programming, Kleinman Center*

DECEMBER 13, 2023

Why Temporary Carbon Storage in Forests Has Little Climate Value: Part 1

Danny Cullenward, *Senior Fellow, Kleinman Center*

DECEMBER 13, 2023

Why Temporary Carbon Storage in Forests Has Little Climate Value: Part 2

Danny Cullenward, *Senior Fellow, Kleinman Center*

JANUARY 10, 2024

Meeting Paris Agreement Targets Requires an Orderly Transition

Kelli Joseph, *Senior Fellow, Kleinman Center*

JANUARY 12, 2024

2024 Starts with a Grim Climate Milestone, but Hydrogen Policy Hope

John Quigley, *Senior Fellow, Kleinman Center*



Photo: istock.com/kynny

FEBRUARY 12, 2024

Grace Under Pressure: How AI Can Help Us Design the Next Generation of Smart Separations Membranes

Sam Layding, *Ph.D. Candidate, School of Engineering and Applied Science*

FEBRUARY 20, 2024

A Long Time Coming: Biden Administration Advances Domestic Critical Minerals Development in Pennsylvania

John Quigley, *Senior Fellow, Kleinman Center*

FEBRUARY 26, 2024

You've Never Heard of the Best Film Ever Made on What We Call Climate Change

Mark Alan Hughes, *Faculty Co-Director, Kleinman Center*

FEBRUARY 28, 2024

The Necessity of Market Instruments for Corporate Environmental Action

Doug Miller, *Director of Market Development, Energy Peace Partners*

MARCH 7, 2024

Heat Beneath Our Feet: Pennsylvania's Prospects for Geothermal Energy

John Quigley, *Senior Fellow, Kleinman Center*

MARCH 12, 2024

Healing Acts: Using Theatre and the Arts to Empower Communities in the Energy Transition

Rebecca Macklin, *Interdisciplinary Research Fellow in Social Inclusion and Cultural Diversity, University of Aberdeen*

MARCH 20, 2024

A Permanence Agenda for Abandoned Oil and Gas Wells in PA and Beyond

John Quigley, *Senior Fellow, Kleinman Center*

MARCH 21, 2024

Investment Horizons: Capitalizing on Energy and Infrastructure in Colombia and Venezuela

Lukas von Koch, *Finance, Wharton School*

APRIL 2, 2024

George Santayana and the Coming Push for Advanced Geothermal Energy

John Quigley, *Senior Fellow, Kleinman Center*

APRIL 4, 2024

Closing the Loop: Building a Battery Recycling Ecosystem

Emily Goldfield, *MBA Student, Wharton School*

APRIL 18, 2024

Blowing Smoke about Burning Stuff for Grid Reliability

John Quigley, *Senior Fellow, Kleinman Center*

APRIL 24, 2024

Building to Last: Impacts of a Philadelphia Energy-Efficiency Housing Rehabilitation Program for Low-Income Households

Susanna Berkouwer, *Assistant Professor of Business Economics & Public Policy, Wharton School*

Adi Jahić, *Database Administrator, Business Economics and Public Policy*

APRIL 25, 2024

The Right Track: Advancing CO₂ Transport by Rail

Alina Ho, *Student Advisory Council Member, Kleinman Center*

MAY 2, 2024

Global Energy Experts at Penn Respond to G7 Coal Phase-Out

Danny Cullenward, *Senior Fellow, Kleinman Center*

Sanya Carley, *Faculty Co-Director, Kleinman Center*

Michael Mann, *Presidential Distinguished Professor in the Department of Earth and Environmental Science*

Scott Moore, *Director of China Programs and Strategic Initiatives, Penn*

John Quigley, *Senior Fellow, Kleinman Center*

Benjamin Schmitt, *Senior Fellow, Kleinman Center and School of Arts and Sciences*

Michael Weisberg, *Interim Director, Perry World House*

MAY 7, 2024

Industrial Decarbonization in Pennsylvania

John Quigley, *Senior Fellow, Kleinman Center*

MAY 8, 2024

Empowering Africa: Exploring African Solutions at World Energy Congress

Ing. Justice Ohene-Akoto, *Materials Science and Engineering, School of Engineering and Applied Sciences*

MAY 13, 2024

Focused Policy Key to Reliable Electricity Sector Transition: Part 1

Kelli Joseph, *Senior Fellow, Kleinman Center*

MAY 14, 2024

Focused Policy Key to Reliable Electricity Sector Transition: Part 2

Kelli Joseph, *Senior Fellow, Kleinman Center*

MAY 16, 2024

A Rising Tide: Public and Private Leadership Drives Innovation

Siddharth Challani, *MBA Student, Wharton School*



The Penn team gathers at the Hult Prize Challenge: Maxx Yung, Sean Fang, Joe Kojima, Izzy Huang (left to right). Students attended the event on a Kleinman Center student grant.

MAY 16, 2024

An Energy Transition without National Security Won't Be “Just”

Benjamin Schmitt, Senior Fellow, Kleinman Center and School of Arts and Sciences

MAY 21, 2024

Equity in Los Angeles' Clean Energy Transition

Yueqi Tiffany Luo, Master of City Planning, Weitzman School

JUNE 3, 2024

Could Wastewater from Marcellus Drilling Aid the Clean Energy Transition?

John Quigley, Senior Fellow, Kleinman Center

JUNE 4, 2024

Uncle Sam Wants You to Launch a Climate Tech Unicorn

Mack Radin, MBA, Wharton School

JUNE 14, 2024

Will America's Clean Car Policies Persist?

Arthur van Benthem, Associate Professor of Business Economics and Public Policy, Wharton School

M. Danial Syed, Research Analyst, Wharton School

JUNE 24, 2024

Let's Localize and Decommodify Our Food Systems

Seema Parmar, Economics and Environmental Studies, School of Arts and Sciences

Podcast Episodes

JULY 11, 2023

Loss and Damage Finance Becomes Reality

Michael Franczak, Research Fellow, International Peace Institute

JULY 25, 2023

America's Electric Power Transmission Crisis

Rob Gramlich, President, Grid Strategies

SEPTEMBER 12, 2023

Why Oil Companies Support Renewable Energy

Arthur van Benthem, Associate Professor of Business Economics and Public Policy, Wharton School

SEPTEMBER 26, 2023

Michael Mann on the Lessons of Climate Change Past

Michael Mann, Presidential Distinguished Professor in the Department of Earth and Environmental Science

OCTOBER 10, 2023

How Uruguay Went (Almost Completely) Fossil Fuel Free

Ramón Méndez Galain, 2024 Carnot Prize Winner
Noah Gallagher Shannon, Freelance Journalist

OCTOBER 24, 2023

The U.S.'s Critical Mineral Supply Challenge

Brian Menell, Chairman and CEO, TechMet Ltd

NOVEMBER 7, 2023

What's a “Fair Share” of Emissions Reductions Under the Paris Climate Process?

Roberto Schaeffer, Full Professor of Energy Economics, CENERGIA

NOVEMBER 21, 2023

Aligning Clean Energy Policy with Grid Reliability

Kelli Joseph, Senior Fellow, Kleinman Center

DECEMBER 5, 2023

Why the IRA's Carbon Capture Tax Credit Could Increase Greenhouse Emissions

Emily Grubert, Associate Professor of Sustainable Energy Policy, University of Notre Dame

JANUARY 9, 2024

FERC Transmission Reform: A New Year's Resolution?

Ari Peskoe, Director, Electricity Law Initiative at Harvard University

JANUARY 23, 2024

AI's Big Future in Energy and Climate Regulation

Cary Coglianese, Edward B. Shils Professor of Law, Carey School of Law

FEBRUARY 6, 2024

The CO₂ Transportation Challenge

Peter Psarras, Research Assistant Professor of Chemical Engineering, School of Engineering and Applied Science

Hélène Pilorgé, Research Associate, Clean Energy Conversions Lab

FEBRUARY 13, 2024

Special Episode: Corporate Disclosure Law

Benjamin Chen, Economics Student, School of Arts and Sciences

FEBRUARY 20, 2024

Accelerating the Energy Transition with Repurposed Energy

Alexandra Klass, James G. Degnan Professor of Law, Michigan Law

MARCH 5, 2024

Europe Confronts the Reality of Energy System Sabotage

Benjamin Schmitt, Senior Fellow, Kleinman Center and School of Arts and Sciences

MARCH 19, 2024

Will Hydrogen Energy Be Clean Energy?

Danny Cullenward, Senior Fellow, Kleinman Center

APRIL 2, 2024

Senator Sheldon Whitehouse on the Rising Prospects for a U.S. Carbon Border Fee

Senator Sheldon Whitehouse, United States Senator

APRIL 23, 2024

Can Competitive Electricity Markets Deliver Reliable Power?

Kelli Joseph, Senior Fellow, Kleinman Center

MAY 7, 2024

California's Solar Equity Challenge

Severin Borenstein, E.T. Grether Professor, Haas School of Business

MAY 21, 2024

Will Latest Solar Trade Dispute Impact U.S. Solar Growth?

Eric Wesoff, Senior Editor, Canary Media

JUNE 4, 2024

Power Struggle: The Electric Grid's Natural Gas Challenge

Seth Blumsack, Director, Center for Energy Law and Policy at Penn State University

JUNE 18, 2024

Can the Global LNG Market Support U.S. Export Ambitions?

Anne-Sophie Corbeau, Global Research Scholar, Center on Global Energy Policy at Columbia University



Uruguay's Ramón Méndez Galain accepts this year's Carnot Prize.



Events

Lectures and Other Events

SEPTEMBER 20, 2023

Welcome Back Reception

OCTOBER 2, 2023

2023 Carnot Prize Policy Lecture and Award Ceremony

Ramón Méndez Galain, 2023 Carnot Prize Winner;
Former Energy Director of Uruguay

Roberto Schaeffer, Full Professor of Energy
Economics, CENERGIA

Elizabeth Magill, President, University of Pennsylvania

Frederick Steiner, Dean, Stuart Weitzman School
of Design

OCTOBER 2, 2023

Student Lunchtime Conversation with Ramón Méndez Galain

Ramón Méndez Galain, Former Energy Director
of Uruguay

Angela Pachon, Research Director, Kleinman Center

NOVEMBER 8, 2023

Grid Decarbonization, Reliability, and the Role of Wholesale Power Market

Kelli Joseph, Senior Fellow, Kleinman Center

John Moura, Director, Reliability Assessment and
Performance Analysis, NERC

Adam Keech, Director, Reliability Assessment and
Performance Analysis, NERC

Angela Pachon, Research Director, Kleinman Center

NOVEMBER 15, 2023

Energy Security in Europe: Now and in the Future

Anna Mikulska, Senior Fellow, Kleinman Center

Benjamin Schmitt, Senior Fellow, Kleinman Center

NOVEMBER 30–DECEMBER 12, 2023

Penn Pavilion Events: COP28

FEBRUARY 15, 2024

Repurposed Energy

Alexandra Klass, James G. Degnan Professor of Law,
Michigan Law

APRIL 4, 2024

Can Europe Plug Its Carbon Leaks with Tariffs?

Stefan Ambec, INRAE Research Professor, Toulouse
School of Economics

Jesús Fernández-Villaverde, Professor of Economics,
School of Arts and Sciences

APRIL 23, 2024

Electricity Bills and Climate Change: Should Energy Hogs Pay More?

Severin Borenstein, E.T. Grether Professor,
Haas School of Business

Sanya Carley, Faculty Co-Director, Kleinman Center

JUNE 11, 2024

State Action on Utility Disconnection Protections

David Konisky, Lynton K. Caldwell Professor, O'Neill
School of Public and Environmental Affairs

Irene Shin, Delegate, Virginia House of Delegates

Shelby Green, Research Fellow, Energy and
Policy Institute

Charlie Harak, Senior Attorney, National Consumer
Law Center

Sanya Carley, Faculty Co-Director, Kleinman Center

Alison Knasin, Lab Manager, Energy Justice Lab



Students and guests socialize after the Carnot Prize.



A student participates in the Undergraduate Climate Seminar in the Kleinman Center classroom.

AI and Climate Change Workshop Series

This five-part series was organized and hosted by the law school's Penn Program on Regulation and co-hosted by the Kleinman Center.

SEPTEMBER 21, 2023

Tackling Climate Change with Machine Learning

David Rolnick, Assistant Professor, McGill University

Cary Coglianese, Director, Penn Program on Regulation, Carey School of Law

OCTOBER 31, 2023

AI and Climate Data

Amy Braverman, Senior Research Scientist, NASA Jet Propulsion Laboratory, California Institute of Technology

Richard Berk, Emeritus Professor of Criminology and Statistics, School of Arts and Sciences

NOVEMBER 20, 2023

Towards Environmentally Sustainable AI

Deep Jariwala, Associate Professor of Electrical and Systems Engineering, School of Engineering and Applied Science

Benjamin Lee, Associate Professor of Electrical and Systems Engineering, School of Engineering and Applied Science

JANUARY 31, 2024

Paternalistic Artificial Intelligence: The Case of Climate Change

Cass Sunstein, Robert Walmsley University Professor, Harvard University

FEBRUARY 27, 2024

AI-Accelerated Assessments of Climate and Weather Risks

Tapio Schneider, Theodore Y. Wu Professor of Environmental Science and Engineering, California Institute of Technology

MARCH 26, 2024

AI and Climate Misinformation

Asheley Landrum, Associate Professor at the Walter Cronkite School of Journalism and Mass Communication, Arizona State University

Amanda Shanor, Assistant Professor, Wharton School

Energy Economics and Finance Seminar Speakers

SEPTEMBER 25, 2023

Brigitte Roth Tran, Economist, Sustainable Growth Research, Federal Reserve Bank of San Francisco

OCTOBER 16, 2023

Johannes Gessner, Ph.D. Student, University of Mannheim

OCTOBER 23, 2023

Zack Miller, Professor, Associate Chair of Economics, University of Missouri

NOVEMBER 6, 2023

Thomas Covert, Adjunct Assistant Professor of Economics, University of Chicago

DECEMBER 4, 2023

Belinda Archibong, Assistant Professor of Economics, Barnard College

FEBRUARY 26, 2024

Matthew Neidell, Professor, Health Policy and Management, Columbia University

APRIL 15, 2024

Olivier Deschenes, Professor, Department of Economics, University of California, Santa Barbara

APRIL 22, 2024

Severin Borenstein, *E.T. Grether Professor, Haas School of Business*

MAY 6, 2024

Catherine Hausman, *Assistant Professor, University of Michigan*

Energy Week Events

MARCH 11, 2024

Growing Climate Resilience: Regenerative Agriculture at University Demonstration Farms

Andrew Hoffman, *Dean, University of Pennsylvania School of Veterinary Medicine*

Hazel Miseda Mumbo, *Vice Chancellor, Great Lakes University Kisumu*

Thomas Parsons, *Professor of Animal Welfare and Ethics, School of Veterinary Medicine—New Bolton Center*

Rewe Thomas, *Deputy Vice Chancellor, Academic Affairs and Research, Great Lakes University of Kisumu*

Thabo Lenneiyi, *Managing Director of the Sustainable Agriculture Fund, Kleinman Center*

MARCH 11, 2024

EVs and the Energy Transition Faculty Lunch

Eric Schelter, *Hirschmann-Makineni Professor of Chemistry, School of Arts and Sciences*

Eric Detsi, *Associate Professor and Undergraduate Chair of Materials Science and Engineering, School of Engineering and Applied Science*

Kelli Joseph, *Senior Fellow, Kleinman Center*

Steve Viscelli, *Lecturer of Sociology, School of Arts and Sciences*

MARCH 11, 2024

Human Rights and Climate-Driven Migration: A Conversation with Dean Atuguba

Raymond Atuguba, *Dean, University of Ghana School of Law*

Fernando Chang-Muy, *Lecturer in Law, Carey School of Law*

MARCH 12, 2024

Energy Justice Panel

Sanya Carley, *Faculty Co-Director, Kleinman Center*

R. Jisung Park, *Assistant Professor, School of Policy and Practice*

Marilyn Howarth, *Adjunct Associate Professor of Pharmacology, Perelman School of Medicine*

Alison Knasin, *Lab Manager, Energy Justice Lab*

MARCH 12, 2024

Women in Engineering and Energy Student Workshop

Anna Siefken, *Deputy Director, Federal Energy Management Program (FEMP), Department of Energy*

MARCH 12, 2024

Accelerating to Net Zero: Fueling the Clean Energy Transition

Anna Siefken, *Deputy Director, Federal Energy Management Program (FEMP), Department of Energy*

Ella Siefken, *Chemical and Biomolecular Engineering, School of Engineering and Applied Science*

Sanya Carley, *Faculty Co-Director, Kleinman Center*

MARCH 12, 2024

Energy and Sustainability Industry Day

MARCH 13, 2024

Undergrad Climate and Energy Policy Seminar

Danny Cullenward, *Senior Fellow, Kleinman Center*

MARCH 13, 2024

Energy Week Lightning Talks

Peter Bazianos, *Undergraduate Student, Vagelos Integrated Program in Energy Research*

Christopher Johnson, *Ph.D. Candidate, Chemical and Biomolecular Engineering*

Arwen Kozak, *Research Associate, Kleinman Center*

Alina Ho, *Student Advisory Council Member, Kleinman Center*

Colby Snyder, *Undergraduate Seminar Fellow, Kleinman Center*

Claire Zhang, *Undergraduate Student, Vagelos Integrated Program in Energy Research*





Rishika Ghosh, Senior Associate, Philadelphia Green Capital Corp. (PGCC) speaking during the Energy Week Alumni Panel.

MARCH 13, 2024

Energy Week Poster Session

MARCH 13, 2024

Decarbonizing the Industrial Sector: Policy Oversight

Danny Cullenward, Senior Fellow, Kleinman Center

Angela Pachon, Research Director, Kleinman Center

MARCH 14, 2024

The Moonshot Mission: Reliably Transitioning the American Electricity Sector

Kelli Joseph, Senior Fellow, Kleinman Center

MARCH 14, 2024

Alumni Networking Coffee Chats

Scott Kleinman, Co-President, Apollo Global Management

Aseem Kapur, Head of Products, General Motors Energy

Rob Ritchie, Director of Energy Storage, Director of Energy Storage

Rishika Ghosh, Senior Associate, Philadelphia Green Capital Corp. (PGCC)

Dominic McGraw, Deputy Director of Energy Services & Operations, City of Philadelphia's Office of Sustainability

MARCH 14, 2024

Careers in the Energy Sector: Energy Week Alumni Panel

Scott Kleinman, Co-President, Apollo Global Management

Aseem Kapur, Head of Products, General Motors Energy

Rob Ritchie, Director of Energy Storage, Director of Energy Storage

Rishika Ghosh, Senior Associate, Philadelphia Green Capital Corp. (PGCC)

Dominic McGraw, Deputy Director of Energy Services & Operations, City of Philadelphia's Office of Sustainability

MARCH 15, 2024

No 'Business as Usual' with Putin on Energy: Expert Perspectives

Alan Riley, Senior Fellow, Global Energy Center, Atlantic Council

Olena Pavlenko, President and Co-Founder, DiXi Group Energy Security Think Tank

Mitchell A. Orenstein, Professor, Russian and East European Studies

Suriya Jayanti, Senior Fellow, Eurasia Center, Atlantic Council

Benjamin Schmitt, Senior Fellow, Kleinman Center

Aura Sabadus, Senior Fellow, Center for European Policy Analysis

MARCH 15, 2024

A Conversation with Senator Sheldon Whitehouse

Sheldon Whitehouse, United States Senator

Michael Mann, Presidential Distinguished Professor in the Department of Earth and Environmental Science

Sanya Carley, Faculty Co-Director, Kleinman Center



Students pose with their t-shirts at the Energy Week Poster Session.

Kleinman Center for Energy Policy



Visiting Scholar Alexandra Klass alongside Kleinman Center Faculty Member Shelley Welton.



People

Visiting Scholars

Alexandra Klass, *James G. Degnan Professor of Law, Michigan Law*

Severin Borenstein, *E.T. Grether Professor, Haas School of Business*

Stefan Ambec, *INRAE Research Professor, Toulouse School of Economics*

Senior Fellows

Danny Cullenward, *Research Fellow, Institute for Carbon Removal Law and Policy at American University*

John Quigley, *Principal, John H. Quigley, LLC*

Benjamin Schmitt, *Senior Fellow, Center for European Policy Analysis*

Kelli Joseph, *Vice President Electricity Markets and Policy Credit Risk, Fifth Third Bank*

Anna Mikulska, *Non-Resident Senior Fellow, Foreign Policy Research Institute*

Undergraduate Fellows

Eliana Atienza, *Environmental Studies, School of Arts and Sciences*

Alondra Betancourt, *School of Arts and Sciences*

Rachel Bina, *Huntsman Program in International Studies and Business*

Luke Campo, *International Relations, School of Arts and Sciences*

Grace Dai, *Computational Biology, School of Arts and Sciences*

Spencer Gibbs, *Economics and Philosophy, Politics, & Economics, School of Arts and Sciences*

Raja Harith, *Finance and ESG, Wharton School*

Joey Jung, *Urban Studies and Political Science, School of Arts and Sciences*

Frank Ma, *Finance and Statistics and Computer Science, Wharton School*

Lillian Miller, *Chemistry and Earth and Environmental Sciences, Vagelos Molecular Life Sciences Program*

Sandro Mocchiolo, *Environmental Studies, Economics, and Spanish, School of Arts and Sciences*

Thu Nguyen, *Environmental Studies, School of Arts and Sciences*

Seema Parmar, *Economics and Environmental Studies, School of Arts and Sciences*

Kiara Perez, *Nursing, School of Nursing*

Nisha Shah, *Materials Science and Engineering, School of Engineering and Applied Science*

Colby Snyder, *Physics and Chemical Engineering, Vagelos Integrated Program in Energy Research*

Summer Fellows

Gwendolyn Cochran, Philadelphia Green Capital Corp Fellow

Kayla Main, Energia Fellow

Shrey Mehta, Kleinman Birol Fellow, International Energy Agency

Student Advisory Council

Ahmed Abdellah, Vagelos Integrated Program in Energy Research Program

Luke Campo, International Relations, School of Arts and Sciences

Joshua Chertok, International Relations and Modern Middle Eastern Studies, School of Arts and Sciences

CeCe Coffey, Law Student, Carey Law School

Christian Daebritz, Finance and Business Analytics, Wharton School

Alina Ho, Systems Science and Engineering and Economics, School of Engineering and Applied Sciences

Caroline Magdolen, Systems Science and Engineering and Environmental Science, Vagelos Integrated Program in Energy Research Program

Bianca Montañez, International Relations and Environmental Studies, School of Arts and Sciences

Julia Pampush, Environmental Studies and Design, School of Arts and Sciences

Dale Tran, Economics, School of Arts and Science

Katherine Vaz Gomes, Ph.D. Candidate, Chemical and Biomolecular Engineering

Laura Lee Ru Ye, Finance and Business Analytics, Wharton School



Kleinman Center undergraduate fellows gather after a seminar with Deputy Director Oscar Serpell.

Faculty Fellows

Arthur van Benthem, Associate Professor of Business Economics and Public Policy, Wharton School

Michael Mann, Presidential Distinguished Professor in the Department of Earth and Environmental Science

R. Jisung Park, Assistant Professor, School of Policy and Practice

Nicholas Pevzner, Assistant Professor of Landscape Architecture, Weitzman School

Peter Psarras, Research Assistant Professor of Chemical Engineering, School of Engineering and Applied Science

Steve Viscelli, Lecturer of Sociology, School of Arts and Sciences

Lauren Lutzke, Post-Doctoral Research Fellow, Penn Center for Science, Sustainability, and the Media

Staff and Faculty

Sanya Carley, *Faculty Co-Director*

Bill Cohen, *Center Coordinator*

Cornelia Colijn, *Executive Director*

Arwen Kozak, *Research Associate*

Thabo Lenneiyi, *Managing Director of the Sustainable Agriculture Fund*

Angela Pachon, *Research Director*

Lindsey Samahon, *Communications Director*

Oscar Serpell, *Associate Director of Academic Programming*

Mollie Simon, *Senior Communications Specialist*

Andy Stone, *Energy Policy Now Host and Producer*

Kimberle Szczurowski, *Financial Administrative Coordinator*

Shelley Welton, *Presidential Distinguished Professor of Law and Energy Policy*

Jennifer Wilcox, *Presidential Distinguished Professor of Chemical Engineering and Energy Policy*



Senior Fellows Kelli Joseph, Benjamin Schmitt, and Anna Mikulska with Scott Kleinman (C'94, W'94) at COP28 in Dubai, UAE (left to right).

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