

KENNETH R. RICHARDS

School of Public and Environmental Affairs
Maurer School of Law
Indiana University
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EDUCATION

- WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA** Philadelphia, PA
Ph.D., Public Policy and Management 1997
Emphasis in environmental, natural resource and regulatory economics and policy. Field examination in public finance. *Dissertation title:* "Integrating Science, Economics and Law into Policy: The Case of Carbon Sequestration in Climate Change Policy."
- THE LAW SCHOOL, UNIVERSITY OF PENNSYLVANIA** Philadelphia, PA
Juris Doctorate 1997
Emphasis in torts, administrative law, environmental law, regulatory law and law and economics.
- TECHNOLOGICAL INSTITUTE, NORTHWESTERN UNIVERSITY** Evanston, IL
Master of Science, Civil Engineering 1984
Emphasis in urban and regional planning, public decision-making processes and quantitative methods for natural resource planning.
- TECHNOLOGICAL INSTITUTE, NORTHWESTERN UNIVERSITY** Evanston, IL
Bachelor of Science, Civil Engineering 1983
Emphasis in environmental engineering.
- DUKE UNIVERSITY** Durham, NC
Bachelor of Arts, Botany and Chemistry 1979
Emphasis in ecology, marine biology and chemistry. Included semester of classes and research at the Duke Marine Laboratory in Beaufort, NC.

EXPERIENCE

- SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS, INDIANA UNIVERSITY** Bloomington, IN
Associate Professor 2004-Present
Assistant Professor 1997-2004
Lecturer 1996-1997
Teaching Assignments: Public Management Economics; Financial and Cost-Benefit Analysis; Environmental Economics; Natural Resources Policy and Management; Cost-Benefit Analysis; Climate Change Science and Policy; Law, Public Management and Public Policy; Law and Public Policy; Law and Public Affairs; Government Regulation in a Market Economy; Governance in Public and Private Contexts; Decision-Making in Public and Private Contexts; Public Management and Administration; JumpStart Math Class; Math Camp for MSES; Case Studies for Policy Analysis; SPEA Capstone Courses; and SPEA Cohort Project.
- MAURER SCHOOL OF LAW, INDIANA UNIVERSITY** Bloomington, IN
Affiliated Associate Professor of Law 2009-Present
Adjunct Professor 2007-2009
Teaching Assignments: Energy Law and Policy; Climate Change Law and Policy

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**OXFORD MARTIN SCHOOL
UNIVERSITY OF OXFORD**

Oxford, United Kingdom
2009-Present

James Martin Senior Visiting Fellow

Coordinating seminar on third party certification and sustainability along with research on forestry offsets, and environmental policy instrument choice.

**SMITH SCHOOL OF ENTERPRISE AND THE ENVIRONMENT
UNIVERSITY OF OXFORD**

Oxford, United Kingdom
2009-Present

Senior Visiting Fellow

Conducting research on climate change policy, environmental policy instrument choice, and sustainable forest product certification.

RICHARD G. LUGAR CENTER FOR RENEWABLE ENERGY

Indianapolis, IN
2007-Present

Associate Director

Supporting Center Director with design and formalization of the Center's by-laws, development and execution of the strategic plan, identification of research projects, development of proposals and assembling research teams, developing and expanding the Board of Advisors.

CENTER FOR RESEARCH ON ENERGY AND THE ENVIRONMENT

Bloomington, IN
2008-Present

Associate Director for Policy

Co-developer of new center. Developing mission, marketing and funding strategies. Leading early research projects on carbon capture and sequestration policy and law, international forest carbon agreements, and spatial-econometric modeling of energy technology and environmental policy impacts on Indiana.

IU AT OXFORD PROGRAM

Bloomington, IN
2005-Present

Director

Proposed, designed and continue to deliver biennial summer program to take public affairs and business students to Oxford for courses in decision-making, governance, environmental policy implementation and international governance of climate change.

BLOOMINGTON ENERGY AND ENVIRONMENTAL INTELLIGENCE, LLC

Bloomington, IN
2009-Present

Principal

Developed limited liability corporation to facilitate university faculty consulting projects. Assisted Senator Lugar's office with analysis of climate change bills in the U.S. Senate; advised the USAID mission and Ministry of Ecology and Natural Resources of Azerbaijan on environmental policies and institutional reforms, worked with State Association of Foresters on U.S. Forest Service NEPA litigation; reviewed model of greenhouse gas life cycle impacts of biofuels for U.S. EPA.

ICF CONSULTING

Senior Consultant

2001-2002

Provided cost-effectiveness analysis and evaluation of carbon sequestration options for nation's largest investor-owned utility companies.

BLOOMINGTON ENVIRONMENTAL COMMISSION

Bloomington, IN
1999-2004

Commissioner

Provided guidance to City Council and Mayor on local environmental issues. Managed development of the Bloomington Environmental Quality Indicators Report. Managed development and analysis of city greenspace GIS database. Supervised interns and managed analyses and reports.

U.S. DEPARTMENT OF JUSTICE/U.S. ENVIRONMENTAL PROTECTION AGENCY

Consultant

1998

Participated in planning and review of materials prepared in support of the federal government's argument in wetlands litigation case.

AMERICAN AUTOMOBILE MANUFACTURERS ASSOCIATION AND CHARLES RIVER ASSOCIATES

Consultant 1997

Commissioned to draft paper on the costs of controlling greenhouse gas emissions and potential role of carbon sequestration in U.S. greenhouse gas policy.

HERMISTON POWER PROJECT

Expert Witness 1996

Provided expert testimony on carbon offset projects in hearing conducted by the Oregon Department of Energy to determine award of permit for 500 MW power plant.

PACIFIC NORTHWEST LABORATORY

Washington, DC

Senior Economist

1993-1996

Managed federal process for development of guidelines for voluntary reporting of greenhouse gas emissions, emissions reductions and carbon sequestration under Energy Policy Act of 1992, Section 1605(b) (see, 59 Fed. Reg. 52769 (1994)). Arranged and led public meetings on proposed voluntary reporting guidelines. Managed development of handbook for U.S. Initiative on Joint Implementation (USIJI), an international program created in accordance with the Framework Convention on Climate Change, 1992, art 4. Managed research to bring constitutional law, contract and public finance theory to bear on issues related to environmental policy instrument choice. Advised Clinton Administration on policy options for the Climate Change Action Plan. Organized conference on "Economics of Climate Change" with more than thirty presenters.

ECONOMIC RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Washington, DC

Economist

1991-1993

Conducted research on design of emissions offset and tradable allowance programs, economics of carbon sinks, renewable energy technology development and dynamic optimization of climate change policy. Advised White House staff on international climate change issues leading up to treaty negotiations in 1992.

PERKINS COIE

Washington, DC

Summer Law Associate

Summer 1991

Clerked with emphasis in environmental law and litigation.

COUNCIL OF ECONOMIC ADVISERS

Washington, DC

Junior Staff Economist

1988-1989

Represented CEA at U.S. Federal Government interagency policy development meetings on global environmental issues. Provided economic guidance to the Response Strategies Working Group of the International Panel on Climate Change (IPCC). Wrote U.S. position paper, "Economic Measures," for the IPCC Response Strategies report. Drafted portions and assisted with the writing of the 1989 *Economic Report of the President*, Chapter 6, "Science, Technology and the U.S. Economy." Analyzed economic impacts of proposed Clean Air Act Amendments.

WHARTON CENTER FOR APPLIED RESEARCH

Philadelphia, PA

Project Consultant

1987-1988

Developed and tested negotiation training tools for resolving multiple stakeholder public policy conflicts, including prisoners' rights and hazardous facility siting.

RISK AND DECISION PROCESSES CENTER

Philadelphia, PA

Consultant to Nevada Nuclear Waste Repository Project

1986-1988

Conducted research on role of compensation in resolution of disputes related to siting hazardous facilities.

GOVERNMENT OF THE COOK ISLANDS AND U.S. PEACE CORPS

Cook Islands

National Energy Planner

1984-1986

Headed Energy Planning Unit. Evaluated economic and engineering aspects of alternative energy technologies. Advised Minister of Energy on tariff policy. Designed specifications and negotiated contract for wood-fueled electricity generation plant. Conducted field trials on drying rates of wood fuels.

PROFESSIONAL ASSOCIATIONS

American Bar Association

Divisions/Sections: Government and Public Sector Lawyers Division; Environment, Energy, and Natural Resources Section; and Administrative Law and Regulatory Practice Section

American Economic Association

Association for Public Policy Analysis and Management

Midwest Law and Economics Association

LICENSES

Admitted to Indiana State Bar, 2005

PUBLICATIONS

LAW ARTICLES

Richards, K. and S. Richards. 2009. "The Evolution and Anatomy of Recent Climate Change Bills in the U.S. Senate: Learning by Doing." 33 *Environs - Environmental Law and Policy Journal* 1 – 110.

Richards, K. and S. Richards. 2009. "Comparative Analysis of Climate Change Bills in the U.S. Senate." 39 *Environmental Law Reporter* 10601-10604.

Richards, K. and S. Richards. 2008. "An Analysis of the Leading Climate Change Bills in the U.S. Senate: S. 2191 America's Climate Security Act of 2007 (Warner-Lieberman) vs. S. 1766 Low Carbon Economy Act of 2007 (Bingaman-Specter)." 38 *Environmental Law Reporter* 10388-10417

Richards, K. 2000. "Framing Environmental Policy Instrument Choice." *Duke Environmental Law and Policy Forum* 10:221-282.

Richards, K. 2000. "A Grateful Response to Comments on 'Framing Environmental Policy Instrument Choice,'" 10 *Duke Environmental Law and Policy Forum* 425-443.

Hahn, R. and K. Richards. 1989. "The Internationalization of Environmental Regulation," 30 *Harvard International Law Journal* 421-446. Reproduced in *The International Library of Essays in Law and Legal Theory: Environmental Law*. Ed. Michael C. Blumm. Hanover: Dartmouth Press. 1992.

POLICY ARTICLES

Auer, M., K. Richards, D. Seesholtz, B. Fischer, C. Freitag, and J. Grice. 2010. "The U.S. Forest Service and Its Responsibilities under the National Environmental Policy Act: A Work Design Problem." *Public Organization Review*. Forthcoming.

Giovanni, E. and K. Richards. 2010. "Determinants of the Costs of Carbon Capture and Sequestration for Expanding Electricity Generation Capacity" *Energy Policy* 38: 6026–6035.

Andersson, K., T. Evans, and K. Richards. 2009. "National Forest Inventories: Policy Needs and Assessment Capacity." *Climatic Change* Volume 93 (Nos. 1 -2): 69-101.

- Arvai, J., G. Bridge, N. Dolsak, R. Franzese, T. Koontz, A. Luginbuhl, P. Robbins, K. Richards, K. Smith Korfmacher, B. Sohngen, J. Tansey and A. Thompson. 2006. "Adaptive Management of the Global Climate Problem: Bridging the Gap Between Climate Research and Climate Policy," *Climatic Change* 78 (1): 217-225.
- Richards, K. 2004. "A Brief Overview of Carbon Sequestration Economics and Policy," *Environmental Management* 33(4):545-558.
- Richards K. and C. Stokes. 2004. "A Review of Forest Carbon Sequestration Cost Studies: A Dozen Years of Research," *Climatic Change* 63:1-48.
- Andersson, K. and K. Richards. 2001. "Implementing an International Carbon Sequestration Program: Can the Leaky Sink Be Fixed?" *Climate Policy* 1: 73-88.
- Richards, K. and K. Andersson. 2001. "The Leaky Sink: Persistent Obstacles to a Forest Carbon Sequestration Program Based on Individual Projects," *Climate Policy* 1: 41-54.
- Richards, K., R. Alig, J Kinsman, M. Palo and B. Sohngen. 1997. "Consideration of Country and Forestry/Land-Use Characteristics in Choosing Forestry Instruments to Achieve Climate Mitigation Goals." *Critical Reviews in Environmental Science and Technology* 27.
- Richards, K. 1997. "The Time Value of Carbon in Bottom-up Studies." *Critical Reviews in Environmental Science and Technology* 27.
- Richards, K. 1997. "Coercion and Enterprise in the Provision of Environmental Public Goods: The Case of Carbon Sequestration in the United States." *Critical Reviews in Environmental Science and Technology* 27.
- Rosenthal, D., J. Edmonds, K. Richards, and M. Wise. 1993. "Stabilizing U.S. Net Carbon Emissions by Planting Trees," *Energy Conversion and Management* 34: 881-888.
- Richards, K., R. Moulton and R. Birdsey. 1993. "Costs of Creation of Carbon Sinks in the U.S.," *Energy Conversion and Management* 34: 905-912.
- Reilly, J. and K. Richards. 1993. "Climate Change Damage and the Trace Gas Index Issue," *Journal of Environmental and Resource Economics* 3: 41-61.
- Gregory, R., H. Kunreuther, D. Easterling, and K. Richards. 1991. "Incentives Policies to Site Hazardous Waste Facilities," *Risk Analysis* Vol. 11, No.4: 667-675.

BOOK CHAPTERS (* indicates peer reviewed)

- *Andersson, K., A. Plantinga, and K. Richards. 2010. "The National Inventory Approach for International Forest Carbon Sequestration Management." In D. Helm and C. Hepburn, eds. *The Economics and Politics of Climate Change*. Oxford: Oxford University Press.
- Richards, K. 2010. "Forests in a U.S. Climate Program: Promising, but the Key is Implementation." In I. Parry and F. Day, eds. *Issues of the Day: 100 Commentaries on Climate, Energy, the Environment, Transportation, and Public Health Policy*. Washington, DC: Resources for the Future.
- *Plantinga, A. and K. Richards. 2009. "International Forest Carbon Sequestration in a Post-Kyoto Agreement." In Aldy, Joseph E. and Robert N. Stavins, eds. *Post-Kyoto International Climate Policy: Implementing Architectures for Agreement*. New York: Cambridge University Press.

- *Richards, K. 2007. "Environmental Taxes in the United States." In Deketelaere, Kurt, Janet E. Milne, Lawrence A. Kreiser and Hope Ashiabor, eds. *Critical Issues in International Environmental Taxation: International and Comparative Perspectives* Volume IV. Oxford: Oxford University Press. 189-217.
- *Richards, K. 2003. "The Instrument Choice Game: When Do Environmental Taxes Win?" In J. Milne, K. Deketelaere, L. Kreiser and H. Ashiabor, eds. *Critical Issues in International Environmental Taxation: International and Comparative Perspectives*, Volume I. Oxford: Oxford University Press. 61-88.
- *O'Riordan, T., C. Cooper, A. Jordan, S. Rayner, K. Richards, P. Runci, and S. Yoffe. 1998. "Institutional Frameworks for Political Action" In Rayner, S. and E. Malone eds. *Human Choice and Climate Change, Volume 1: The Societal Framework*. Columbus, OH: Battelle.
- Richards, K. 1996. "Joint Implementation in the Framework Convention on Climate Change: Opportunities and Pitfalls." In *An Economic Perspective on Climate Change Policies, Monograph Series on Tax, Regulatory, and Environmental Policies & U.S. Economic Growth*. American Council for Capital Formation Center for Policy Research. Washington, DC. January 1996.
- Richards, K.. 1992. "Policy and Research Implications of Recent Carbon Sequestering Analysis." In Reilly, J and M. Anderson, eds. *Economic Issues in Global Climate Change: Agriculture, Forestry and Natural Resources*. Boulder: Westview Press.
- Richards, K. 1990 "Policy Options," In D. Fisher, ed. *Options for Reducing Greenhouse Gas Emissions*. Stockholm: The Stockholm Environment Institute.

REPORTS AND PROCEEDINGS (* indicates peer reviewed)

- Baldwin, E. and K. Richards. 2010 "Institutional Support for an International Forest Carbon Sequestration Agreement" Discussion Paper 2010-41, Harvard Project on International Climate Agreements, Belfer Center for Science and International Affairs, Harvard Kennedy School
- Richards, K., J. Chang. and J. Allerhand. 2010 "Pore Space Ownership and Carbon Capture and Storage Legislation in Indiana" Report prepared for Duke Energy.
- *Richards, K. and S. Richards. 2009. "The Evolution and Anatomy of Recent Climate Change Bills in the U.S. Senate: Critique and Recommendations." Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1368903.
- Bloomington Energy and Environmental Intelligence. 2009. "Environmental Policy and Institutional Reform in Azerbaijan: Report for the Ministry of Ecology and Natural Resources, Government of Azerbaijan."
- C. Freitag, K. Richards, K. D. Seesholtz, M. Auer, J. Barbour, B. Fischer, and G. McCardle. 2009. "Contrasts in NEPA: Approaches by U.S. Forest Service Region 1 and Region 6 – A Pilot Study." Report to the United States Forest Service.
- Richards, K., D. Seesholtz, J. Grice, M. Auer, J. Barbour, B. Fischer, C. Freitag, and G. McCardle. 2008. "Internal Organization and External Contracting for the Forest Service's NEPA Process: Lessons from New Institutional Economics and Strategic Organizational Design." Report to the United States Forest Service.
- Plantinga, A. and K. Richards. 2008. "International Forest Carbon Sequestration in a Post-Kyoto Agreement." Harvard Project on International Climate Agreements. Discussion Paper 08-11. Cambridge, MA.

- Richards, K. and S. Richards. 2008. "Coal and the Environment, 2006-2008," Chapter 8 in *Indiana Coal Report 2008*. Indiana Center for Coal Technology Research. West Lafayette, IN.
- Ringquist, E., A. Barnes, M. Davis, F. Picardal, and K. Richards. 2008. "Waste Tire Policy Recommendations for Indiana." Prepared for the Indiana Department of Environmental Management Office of Pollution Prevention and Technological Assistance. Indianapolis, IN.
- *Richards, K., N. Sampson, and S. Brown. 2006. "Agricultural and Forestlands: U.S. Carbon Policy Strategies." Report for the Pew Center on Global Climate Change. Arlington, VA.
- *Stavins, R. and K. Richards. 2005. "The Cost of U.S. Forest-based Carbon Sequestration." Report for the Pew Center on Global Climate Change. Arlington, VA.
- Richards, K. 2005. "Forest Carbon Sequestration Costs in the United States and Louisiana." In Proceedings of Louisiana Natural Resources Symposium. July 18-20, 2005. Baton Rouge: Louisiana State University.
- Richards, K. 1997. "Estimating Costs of Carbon Sequestration for a United States Greenhouse Gas Policy." Report prepared for Charles River Associates, Inc.
- Richards, K. 1997. "Commentary on Edmonds et al., 'Atmospheric Stabilization and the Role of Energy Technology'" In *Climate Change Policy, Risk Prioritization, and U.S. Economics Growth, Monograph Series on Tax, Regulatory, and Environmental Policies & U.S. Economic Growth*. American Council for Capital Formation Center for Policy Research. Washington, DC. January 1997.
- *Intergovernmental Panel on Climate Change (IPCC). 1996. *Working Group III Second Assessment Report, Economics of Climate Change*. Lead Author on Chapter 8, "Key Determinants of Abatement Costs"
- *Intergovernmental Panel on Climate Change (IPCC). 1996. *Working Group III Second Assessment Report, Economics of Climate Change*. Lead Author on Chapter 9, "Estimates of Abatement Costs."
- Hahn, R. and K. Richards 1994. "Evaluating Economic Instruments for Controlling Greenhouse Gas Emissions," U.S. Department of Energy. Washington, DC.
- Rayner, S., and K. Richards. 1994. "I Think that I Shall Never See...A Lovely Forestry Policy: Land Use Programs for Conservation of Forests," *Proceedings of IPCC Working Group III Workshop on Policy Instruments and Their Implications*. Tsukuba, Japan. January 1994.
- Richards, K. 1991. "U.S. Potential for Tree Planting and Forest Management to Sequester Carbon," Prepared for Pacific Northwest Laboratory. Washington, DC. Incorporated in Report to Congress, *Limiting Net Greenhouse Gas Emissions in the United States*, Department of Energy, DOE/PE-0101, 1990.
- *Moulton, R. and K. Richards. 1990. "Costs of Sequestering Carbon through Tree Planting and Forest Management in the United States." U.S. Department of Agriculture, Forest Service, General Technical Report WO-58. December 1990.

BOOK REVIEWS

- Richards, K. 2007. "Book Review: *The State and the Global Ecological Crisis*, John Barry and Robyn Eckersley, eds." Forthcoming in *Perspectives on Politics* 5 : 182-184.

Richards, K. 1998. "Putting a Price Tag on Nature - *Nature's Services: Societal Dependence on Natural Ecosystems*, Ed. Gretchen C. Daily," *Issues in Science and Technology* XIV(2):88-90.

COMMENTARY/EDITORIAL ARTICLES

Plantinga, A. and K. Richards. 2009. "International Forest Carbon Sequestration in a Post-Kyoto Agreement." Section V.1.21 In Aldy, Joseph E. and Robert N. Stavins, eds. *Post-Kyoto International Climate Policy: Summary for Policy Makers*. New York: Cambridge University Press.

Barnes, A.J. and K. Richards. 2009. "Toward "Climate Friendly Coal." *SPEA Insights*. May 2009.

Graham, J. and K. Richards 2009. "Better to Craft New Legislation" Invited contribution to New York Times online forum, "Who Should Regulate Greenhouse Gases?" February 19, 2009. At: <http://roomfordebate.blogs.nytimes.com/2009/02/19/the-epa-puts-on-the-heat/#more-189>

Richards, K. 2008. "Reframing the cap-and-trade dialogue" and "Don't forget about the role of politics." Invited contributions to the Bulletin of Atomic Scientists round table discussion of Carbon Taxes vs. Cap-and-Trade. At: <http://www.thebulletin.org/web-edition/roundtables/carbon-tax-vs-cap-and-trade#rt4696>

Richards, K. 2008. "Forests in the U.S. Climate Program: Promising, but the Key is Implementation." Resources for the Future Weekly Policy Commentary.

Richards, K. and Barnes, A.J.. 2008. "Carbon Capture Key to Coal," *The Journal Gazette* and *The Indianapolis Star*. November 18, 2008.

Richards, K. 2008. Op-ed piece that appeared under alternative titles including "Further drilling won't ease pain at pump," "Hard Facts of Increased Global Consumption Argue against Ever-more Drilling," and "Renewables are the Only Path to Energy Independence." Published nationally in June and July 2008 by 31 newspapers.

Richards, S. and K. Richards. 2007. "Congress, Carbon and CCX – This Time it's Our Money." *The Times of Northwest Indiana*. December 27, 2007.

Richards, K. 2007. "McCain-Lieberman Bill is Backward; Bingaman Got it Right." *The Hill*. March 5, 2007.

IN DEVELOPMENT

Hahn, R. and K. Richards "Environmental Offset Programs: Survey and Synthesis."

K. Richards and E. Baldwin. "Forest PINC: A Deeper Shader of REDD."

Dick, J., E. Giovanni, and K. Richards. "Economic Analysis of Biomass and Coal Co-fueled Integrated Gasification Combined Cycle with Carbon Capture and Storage."

Richards, K., J. Allerhand, J. Chang and J Rupp. "Legal Considerations for Geological Sequestration."

Richards, K., D. Good, and J. Chang. "The Rationality of State Level Fees for Hazardous Waste Management: The Case of the Midwest States."

RECENT INVITED PRESENTATIONS

- “Forest PINC, REDD and Institutions for International Forest Carbon Sequestration.” Smith School for Enterprise and the Environment, Oxford University. June 14, 2010.
- “Property Rights, Transaction Costs and the Regulation of Carbon Capture and Storage.” Annual Carbon Capture and Sequestration Conference. Pittsburgh PA. May 12, 2010.
- “Net-Negative CO2 Emissions: The Potential for Biomass Gasification to be the Least Cost Electricity Generation Technology in a Carbon Constrained World.” Annual Carbon Capture and Sequestration Conference. Pittsburgh PA. May 11, 2010.
- “Climate Change in the Waxman-Markey Bill: A Love-Hate Relationship.” Bloomington Newcomers Club. Bloomington IN. April 19, 2010.
- “Terrestrial Carbon in an International Climate Agreement: Forest PINC is a Deeper Shade than REDD” Elliott School of International Affairs, The George Washington University. Washington DC, January 25, 2010.
- “Designing the Post-Kyoto International Climate Policy Architecture” Roundtable at Allied Social Science Associations Conference. Atlanta, GA. January 6, 2009.
- “What Action Should the United States Take to Respond to Climate Change?” Lugar's Symposium for Tomorrow's Leaders. Indianapolis, IN, December 12, 2009.
- “Forest PINC: A Deeper Shade of REDD” USAID, Washington DC, November 2009.
- “Design Elements of National Climate Legislation” USAID, Washington DC, November 2009.
- “Forest PINC - A Deeper Shade of REDD: Forest Carbon in a Multilateral Climate Agreement” School of Advanced International Studies, Johns Hopkins University, Washington DC, November 2009.
- “A Framework for Climate Regulation” School of Public and Environmental Affairs, Indiana University, Anticipating, Understanding and Adapting to a New Climate Regime, Washington D.C. November 2009.
- “Three Steps to Battle Climate Change.” Bloomington 350 Panel on Preparing for Copenhagen, Indiana University, October 2009.
- “Climate Change in the Waxman-Markey Bill: A Love-Hate Relationship.” School of Public and Environmental Affairs Dean's Council, Washington D.C. October 2009.
- “State Regulations for Carbon Capture and Storage.” School of Public and Environmental Affairs Ph.D. Research Seminar, Indiana University, October 2009.
- “Academic-Industry-Government Collaboration for Research and Analysis In Energy and Environment.” Joint Presentation for University of Nevada, Las Vegas and NV Energy, Las Vegas Nevada, September 2009.
- “Design Features of Climate Legislation.” School of Public and Environmental Affairs Conference, Indiana University, The Search for Wise Energy Policy, Washington D.C. June 2009.
- “Property Law and CCS Regulation: Analogs, Theories, and Legislative Strategies.” Briefing for Indiana State Legislators. Indiana University – Purdue University at Indianapolis. Indianapolis IN. June 2009.

- “The Evolution and Anatomy of Recent Climate Change Bills in the U.S. Senate: Critique and Recommendations.” Smith School of Enterprise and the Environment, University of Oxford. June, 2009.
- “Restructuring the Electric Utility Market in the US: Regulation and Collaboration.” Transatlantic Policy Consortium Colloquium, Repositioning Europe and America for Growth: Policy Frameworks for Innovative and Competitive Societies. Jönköping, Sweden. May 2009
- “Determinants of the Costs of Carbon Capture and Sequestration for Expanding Electricity Generation Capacity.” With Emily Giovanni. Eighth Annual Conference on Carbon Capture & Sequestration. Pittsburgh PA May 2009.
- “Property Law and CCS Regulation: Analogs, Theories, and Legislative Strategies” With Joice Chang, Joanna Allerhand. Eighth Annual Conference on Carbon Capture & Sequestration. Pittsburgh PA May 2009.
- “Environmental Policy Research Discussion: Carbon Capture and Storage.” Greenspun College of Urban Affairs, University of Nevada, Las Vegas. April 2009.
- “Outlook for Clean Energy and Geological Carbon Sequestration.” Indiana University-Purdue University at Indianapolis Energy Policy Symposium. Indianapolis, IN. April 2009.
- “Legislating Climate Change Cures: What Would the Doctor Order?” School of Public and Environmental Affairs Capitol Hill Colloquium, Washington DC. March 2009.
- “Evolution and Anatomy of Recent Climate Change Bills in the U.S. Senate: Critique and Recommendations.” National Association of Regulatory Utility Commissioners, Subcommittee on Clean Coal, NARUC Winter Meetings. Washington D.C. February 2009.
- “Cost Model of Carbon Capture and Sequestration”; “Carbon Capture and Sequestration: Analyzing the Analogs”; “Property Law Theory for Carbon Capture and Sequestration”; and “Guidance for the State of Indiana on Carbon Capture and Sequestration.” Briefing of Duke Energy. Indianapolis, IN. December 2008
- “Global Warming.” Senator Lugar's Symposium for Tomorrow's Leaders. Indianapolis, IN. December 2008.
- “The Evolution and Anatomy of Recent Climate Change Bills in the U.S. Senate: Critique and Recommendations.” Indiana Energy Conference. Indianapolis, IN. October 2008.
- “CCS Regulation: The Implications of Property Rights and Tort Law.” Indiana Governor’s Carbon Capture and Storage Summit. Indianapolis, IN. September 2008.
- “Climate Change and the Future of Indiana,” Taped and distributed talk as part of virtual conference organized by Sierra Club and other environmental organizations. Bloomington, IN. October 2008.
- “The Evolution and Anatomy of Recent Climate Change Bills in the U.S. Senate: Critique and Recommendations.” Indiana Center for Coal Technology Research. Bloomington, IN. June 2008.
- “Carbon Capture and Storage: Lessons from Energy Law and Policy.” Seventh Annual Carbon Capture and Sequestration Conference. Pittsburg, PA. May 2008.
- “Preparing for Carbon Capture and Storage: Policy and Legal Considerations.” Bard College. Avon upon Hudson, NY. April 2008.
- “Preparing for Carbon Capture and Storage: Policy and Legal Considerations.” Pennsylvania State University. University Park, PA. March 2008.

- “Forest Carbon in a Post Kyoto Agreement.” Kennedy School of Government, Harvard University. Cambridge, MA. March 2008.
- “Global Warming Policy,” Senator Lugar's Symposium for Tomorrow's Leaders. Indianapolis, IN. December 2007.
- “Applications of New Institutional Economics to the U.S. Forest Service NEPA Process.” The Law School at the University of South Carolina at Columbia. Columbia, SC. November 2007.
- “Issues to Watch in Upcoming Climate Legislation.” SPEA Alumni Meeting, Chicago, IL. October 2007.
- “Global Warming Developments.” Senator Lugar's Symposium for Tomorrow's Leaders. Indianapolis, IN. December 2007.
- “Contrasts in NEPA: Approaches by U.S. Forest Service Region 1 and Region 6 - A Pilot Study.” NEPA in the 21st Century Forest Service Workshop. Skamania, WA. March 2007.
- “Internal Organization and External Contracting for the Forest Service’s NEPA Process: Lessons from New Institutional Economics and Strategic Organizational Design,” NEPA in the 21st Century Forest Service Workshop. Skamania, WA. March 2007.
- “What is Next for Terrestrial Carbon Sequestration?” Modeling Ag-Forest Offsets and Biofuels in U.S. and Canadian Regional and National Mitigation. Shepherdstown, WV. March 2007.
- “Global Warming Policy,” Senator Lugar's Symposium for Tomorrow's Leaders. Indianapolis, IN. December 2006.
- “Launching a National Terrestrial Carbon Sequestration Program,” Keynote address at Carbon and the Minnesota Landscape: Setting the Agenda, Minnesota Terrestrial Carbon Sequestration Workshop. Minneapolis, MN. November 2006.
- “Agricultural and Forestlands: U.S. Carbon Policy Strategies,” Congressional Briefing. Washington, DC. September 2006.
- “Environmental Taxes in the United States: A Harlequin Romance.” Keynote address at 6th Annual Global Conference On Environmental Taxes. Leuven, Belgium. September 2005.
- “Forest Carbon Sequestration Costs in the United States and Louisiana,” Louisiana Natural Resources Symposium, Louisiana State University. Baton Rouge, LA. July 2005.
- “Developing a Greenhouse Gas Abatement Program: Recognizing Diversity.” Keynote address at Greenhouse Gas Management Canada Policy Forum. Victoria, British Columbia. April 2005.
- “State Hazardous Waste Taxes and Small Firm Behavior.” U.S Environmental Protection Agency, National Center for Environmental Economics Seminar Series. Washington, DC. February 2005.

RECENT REVIEW PANELS

United States Environmental Protection Agency. Review of EPA greenhouse gas lifecycle methodology for biofuels. June 2009.

Indiana Geological Survey. Review and Advisory Panel. Bloomington, IN. November 2007.

U.S. Department of Energy. Industrial Technologies Program Review. Arlington, VA. September 2006.

National Energy Technology Laboratory. Carbon Sequestration Program Review. Pittsburgh, PA. September 2005.

U.S. Department of Energy. Integrated Assessment Review. Washington, DC. May 2004.

GRANTS, FELLOWSHIPS, CONTRACTS AND AWARDS

Oxford Martin School, Oxford University. 2010. Support (~GBP 40,000) for James Martin Senior Visiting Fellow position, 2010-2012.

School of Public and Environmental Affairs, Indiana University. 2010. Systems Analysis of Energy Futures in Indiana. Sustainability Research Development Grant (**\$20,000**)

United States Agency for International Development. 2009. Contract (~**\$70,000**) to evaluate the Azerbaijan national legislation, regulation and institutions for the environmental protection. With Stephanie Hayes Richards, Matthew Auer and John Wittman.

School of Public and Environmental Affairs, Indiana University. 2009. Sustainability Research Development Grant (**\$10,000**) for “Third Party Sustainability Certification: Does the Forest Sustainability Certification (FSC) Program Deliver?” with Miranda Hutton and Steve Rayner.

Smith School for Enterprise and the Environment, Oxford University. 2009. Support (~**GBP 11,400**) for Senior Visiting Fellow position 2009-2010.

Indiana University. Office of Vice President for International Affairs. 2009. Support (**\$1,500**) for Senior Visiting Fellow Position at Smith School for Enterprise and the Environment.

Duke Energy Foundation. 2008 – 2009. Research grant (**\$63,000**) for “Carbon Capture and Sequestration Law and Policy.”

Indiana University. 2009 – 2011. President’s grant (**\$50,000**) for “Modeling the Impact of Enhanced Renewable Energy Production and Utilization and the Consequences for Indiana” via Center for Research on Energy and the Environment, Indiana University.

Kennedy School of Government, Harvard University. 2008. Commissioned paper (**\$3,000**) on Forests in a Post Kyoto Agreement with Andrew Plantinga.

U.S. Forest Service. 2008 – 2009. Grant (**\$30,000**) for “Formalization in the NEPA Process” with Sergio Fernandez and Burnell Fischer.

U.S. Forest Service. 2008 – 2010. Grant through Society of American Foresters (**\$125,000**) for “Forest Service Decision Rationale in NEPA” with Michael Mortimer and Clare Ryan.

Indiana University. 2008 - 2010. IU President’s grant (**\$390,000**) for development of Center for Research on Energy and the Environment with J.C. Randolph and John Rupp.

- U.S. Forest Service. 2006-2007. Research grant (**budget: \$49,045**) for “Comparative Analysis of NEPA Process, Organization, and Personnel” with co-investigators Burnell Fischer and Matt Auer.
- U.S. Forest Service. 2006-2007. Research grant (**budget: \$76,754**) for “New Institutional Economic Analysis of the Forest Service NEPA Responsibilities: A Business Approach” with co-investigators Burnell Fischer and Matt Auer.
- Indiana Department of Environmental Management. 2006-2007. Research grant (**budget: \$110,000**) for “A Waste Tire Management Program for Indiana” with PI Evan Ringquist, A. James Barnes, and Flynn Picardl.
- Duke Energy. 2005. Grant for symposium and carbon grove planting (**\$10,000**) in honor of former U.S. Environmental Protection Agency Administrator William Ruckelshaus.
- U.S. Environmental Protection Agency. 2001-2003. Research grant (**budget: \$180,000**) for “Looking Inside the Black Box: Microlevel Empirical Analyses of the Impact of State and Federal Policy Instruments on Hazardous Waste Generation and Management” with CoPI David Good.
- National Science Foundation. 1998. Conference grant (**\$18,250**) for conference held in 1999 on “A Comparison of Environmental Policy Implementation in the United States and Canada.”
- Canadian Embassy. 1998. Conference grant (**\$3,000**) for conference held in 1999 on “A Comparison of Environmental Policy Implementation in the United States and Canada.”
- Teaching Excellence Recognition Award, Summer Faculty Fellowship. 1998. Teaching fellowship (**\$6,000**) for “Developing Internet Support for Economics and Law Classes” to support early work on development of websites to support classroom pedagogy.
- U.S. Department of Energy. 1996-1998. Research grant (**\$107,297**) for “Beyond AEEI: Technical Changes in Integrated Assessment.” Work conducted in cooperation with the Pacific Northwest National Laboratory, operating under separate grant.

HONORS

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| Outstanding Graduate Teaching Award, School of Public and Environmental Affairs | 2009 |
| Intergovernmental Panel on Climate Change, certificate for “contributing to the award of the Nobel Peace Prize of 2007” | 2008 |
| Freshman Learning Program, Fellow | 2007 |
| Trustees Teaching Award, Indiana University | 2002 |
| Excellence in Teaching Award, School of Public and Environmental Affairs | 2000 |
| Outstanding Undergraduate Teaching Award, School of Public and Environmental Affairs | 1999 |
| Excellence in Teaching Award, School of Public and Environmental Affairs | 1999 |
| Director’s Award for Excellence, Pacific Northwest National Laboratory | 1993 |
| Norman and Rosita Winston Law and Economics Fellow, University of Pennsylvania | 1988, 1990-1991 |
| Alfred F. Buehler Public Administration Fellow, Wharton School, University of Pennsylvania | 1987-1988 |
| Wharton Dean’s Fellow in Public Policy, University of Pennsylvania | 1986-1987 |
| Walter P. Murphy Fellow in Civil Engineering, Northwestern University | 1982-1983 |