

CAROLYN FISCHER

Resources for the Future
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EDUCATION

University of Michigan, Ann Arbor, MI. 1991–97.

Ph.D. in Economics with fields in public finance and natural resource economics, 1997.

Joseph L. Fisher Dissertation Award, Resources for the Future, 1996–97.

Rackham Pre-Doctoral Fellowship, 1995–96.

Third-Year Paper Prize, Department of Economics, 1994.

M.A. in Economics, 1993.

University of Pennsylvania, Philadelphia, PA. 1986–90.

B.A. in International Relations with honors (major Valedictorian) and Economics,
minor in French, magna cum laude.

Benjamin Franklin Scholar, 1986–90.

Université de Strasbourg, Institut d'Études Politiques, Strasbourg, France. 1988–89.

Certificat de relations internationales.

PROFESSIONAL EXPERIENCE

Resources for the Future (RFF), Washington, DC. 1997–present.

Senior Fellow, 2007–. Indefinite appointment (tenure), 2004.

Associate Director, Center for Climate and Electricity Policy, 2009–.

Gothenburg University, Sweden. 2012–present.

Visiting Professor, School of Business, Economics, and Law.

World Bank Group, Washington, DC. (various dates)

Consultant.

Johns Hopkins University, 1999.

Instructor, Natural Resource and Environmental Economics.

Council of Economic Advisors, Washington, DC. 1994–95.

Staff economist.

University of Michigan Department of Economics, 1991–94.

Teaching Assistant, Introductory Microeconomics, Fall 1991, Spring 1992 and 1993;

Industrial Policy Analysis, Fall 1993; Seminar in Economics, Spring 1994;

Head Teaching Assistant, Introductory Macroeconomics, Fall, 1992.

USDA, Economic Research Service, Resources and Technology Division, Washington, D.C.

Summer 1992.

Intern in Land, Capital Assets, and Global Change Branch.

The WEFA Group, Philadelphia, PA. 1990–91.

Economic analyst in World Service division.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Association of Environmental and Resource Economists (AERE):
Organizing Committee, AERE Summer Workshop 2013;
Board of Directors, 2008–2010;
Program Committee, 2005–2007.

Dahrendorf Visiting Fellow, London School of Economics, 2013.

Member, Environment Canada's Environmental Economics and Policy Research Network,
2012–present.

Fellow, CESifo Research Network, Energy and Climate Economics Area, 2009–present.

Leadership Committee for the Energy Collaborative Analysis Initiative, NREL, 2007–present.

Editorial Board, *Resource and Energy Economics*, 2006–present.

Fellow, Center for Advanced Study at the Norwegian Academy of Science and Letters, with the
group Environmental Economics: Policy Instruments, Technology Development, and
International Cooperation, 2005.

Expert Advisor, Canadian National Round Table on the Environment and the Economy, 2003–
2010.

Member, AERE, American Economic Association, Canadian Economics Association,
European Association of Environmental and Resource Economists (EAERE)

PUBLICATIONS

Journal Articles:

Fischer, C. and G. Heutel. Forthcoming. Environmental Macroeconomics: Environmental Policy,
Business Cycles, and Directed Technical Change, *Annual Review of Resource
Economics*.

Fischer, C. and T.P. Lyon. Forthcoming. Competing Environmental Labels, *Journal of
Economics & Management Strategy*.

Fischer, C. and A. K. Fox. 2012. Climate policy and fiscal constraints: Do tax interactions
outweigh carbon leakage? *Energy Economics* 34 (Supplement 2): S218–227 (December).

Fischer, C. and A. K. Fox. 2012. Comparing Policies to Combat Emissions Leakage: Border Tax
Adjustments versus Rebates, *Journal of Environmental Economics and Management*. 64
(2): 199–216 (September).

Fischer, C. and T. Sterner. 2012. Climate Policy, Uncertainty, and the Role of Technological
Innovation, *Journal of Public Economic Theory*. 14 (2): 285–309.

Fischer, C., A. Torvanger, M. K. Shrivastava, T. Sterner and P. Stigson. 2012. How Should
Support for Climate-Friendly Technologies Be Designed? *Ambio* 41 (1): 33–45.

Zetterberg, L., M. Wråke, T. Sterner, C. Fischer and D. Burtraw. 2012. Short-Run Allocation of
Emissions Allowances and Long-Term Goals for Climate Policy, *Ambio* 41 (1): 23–32.

Fischer, C. and M. Springborn. 2011. Emissions Targets and the Real Business Cycle. *Journal of
Environmental Economics and Management*. 62 (3) (November 2011): 352–366.

- Fischer, C. and A. K. Fox. 2011. The Role of Trade and Competitiveness Measures in US Climate Policy, *American Economic Review: Papers and Proceedings*. 101 (3) (May 2011): 258–262.
- Fischer, C., E. Muchapondwa and T. Sterner. 2011. A Bioeconomic Model of Community Incentives for Wildlife Management Before and After CAMPFIRE. *Environmental and Resource Economics* 48:303–319.
- Anderson, S. T., I. W. H. Parry, J. M. Sallee, and C. Fischer. 2010. Automobile Fuel Economy Standards: Impacts, Efficiency, and Alternatives, *Review of Environmental Economics and Policy* 5 (1): 89-108.
- Boehringer, C., C. Fischer, and K.E. Rosendahl. 2010. The Global Effects of Subglobal Climate Policies, *B.E. Journal of Economic Analysis & Policy*. 10 (2) (Symposium): Article 13.
- Fischer, C. and L. Preonas. 2010. Combining Policies for Renewable Energy: Is the Whole Less than the Sum of Its Parts? *International Review of Energy and Resource Economics* 4 (1): 51–92.
- Fischer, C. 2010. Market Power and Output-based Refunding of Environmental Policy Revenues, *Resource and Energy Economics* 33: 212–230.
- Albers, H.J., C. Fischer, and J.N. Sanchirico. 2010. Invasive Species Management in a Spatially Heterogeneous World: Spatial vs. Uniform Policies. *Resource and Energy Economics* 32 (4): 483–499.
- Fischer, C. and R. Laxminarayan. 2010. Managing partially protected resources under uncertainty: an application to antibiotic resistance *Journal of Environmental Economics and Management* 59 (2) (March): 129–141.
- Sanchirico, J.N., H.J. Albers, C. Fischer and C. Coleman. 2010. Spatial Management of Invasive Species: Pathways and Policy Options, *Environmental and Resource Economics* 45 (4) (April): 517–535.
- Fischer, C. 2010. Does trade help or hinder the conservation of natural resources? *Review of Environmental Economics and Policy*. 4 (1): 103–121.
- Fischer, C. 2010. When Do Renewable Portfolio Standards Lower Electricity Prices? *The Energy Journal*. 31 (1): 101–120.
- Fischer, C., R. Morgenstern, and E. Herrnstadt. 2009. Understanding Bias in EIA Forecasts of Energy Demand, *Resource and Energy Economics* 31 (3): 198–209.
- Fischer, C. and R.G. Newell. 2008. Environmental and Technology Policies for Climate Mitigation, *Journal of Environmental Economics and Management*. 55 (2): 142–162.
- Fischer, C. 2008. Comparing Flexibility Mechanisms for Fuel Economy Standards, *Energy Policy*. 36 (8): 3106–3114.
- Fischer, C. 2008. Emissions Pricing, Spillovers, and Public Investment in Environmentally Friendly Technologies, *Energy Economics*. 30 (2): 487–502.
- de Coninck, H., C. Fischer, R.G. Newell, and T. Ueno. 2008. International Technology–Oriented Agreements to Address Climate Change, *Energy Policy*. 36 (1): 335–356.

- Fischer, C. and A.K. Fox. 2007. Output-based Allocation of Emissions Permits for Mitigating Tax and Trade Interactions, *Land Economics*. 83 (4): 575–599.
- Fischer, C., W. Harrington, and I.W.H. Parry. 2007. Do Market Failures Justify Tightening Corporate Average Fuel Economy (CAFE) Standards? *The Energy Journal* 28 (4): 1–30.
- Bernard, A.L., C. Fischer, and A.K. Fox. 2007. Is There a Rationale for Output-based Rebating of Environmental Levies? *Resource & Energy Economics* 29 (2): 83–101.
- Fischer, C. 2006. Multinational Taxation and International Emissions Trading, *Resource & Energy Economics* 28 (2): 139–159.
- Fischer, C. and R.D. Morgenstern. 2006. Carbon Abatement Costs: Why the Wide Range of Estimates? *Energy Journal* 27(2): 73–86.
- Fischer, C. and R. Laxaminarayan. 2005. Sequential Development and Exploitation of an Exhaustible Resource: Do Monopoly Rights Promote Conservation? *Journal of Environmental Economics and Management*. 49 (3): 500–515.
- Fischer, C. 2005. Project-based mechanisms for emissions reductions: balancing trade-offs with baselines, *Energy Policy*, 33 (14): 1807–1823.
- Fischer, C. 2005. On the Importance of the Supply Side in Demand-Side Management, *Energy Economics*, 27 (1): 165–180.
- Fischer, C. 2005. Competition in Markets for Depletable Resources with Setup Costs. *Environmental and Resource Economics*, 30 (3): 243 – 257.
- Margolis, M., J.F. Shogren and Carolyn Fischer. 2005. How trade politics affect invasive species control, *Ecological Economics*, 52 (3): 305–313.
- Fischer, C. 2004. The Complex Interactions of Markets for Endangered Species Products, *Journal of Environmental Economics and Management*, 48 (2): 926–953.
- Fischer, C., M.A. Toman and C. Withagen. 2004. Optimal Investment in Clean Production Capacity, *Environmental and Resource Economics*, 28 (3): 325–345.
- Fischer, C. and R. Laxaminarayan. 2004. Monopoly Extraction of an Exhaustible Resource with Two Markets, *Canadian Journal of Economics*, 37 (1): 178–188.
- Fischer, C. 2003. Combining Rate-based and Cap-and-Trade Emissions Policies, *Climate Policy* 3S2: S89–S109.
- Fischer, C., I.W.H. Parry and W.A. Pizer. 2003. Instrument Choice for Environmental Protection when Technological Innovation is Endogenous, *Journal of Environmental Economics and Management* 45(3): 523–545.
also in *Economics of Environmental Law*, edited by R. R.W. Brooks, N. O. Keohane, and D. A. Kysar. Vol. II Ch. 3, Northampton, MA: Edward Elgar Publishing. 2009.
- Parry, I. W. H., W. A. Pizer and C. Fischer. 2003. How Large Are the Welfare Gains from Technological Innovation Induced by Environmental Policies? *Journal of Regulatory Economics* 23(3): 237–255.
- Fischer, C. 2003. Climate Change Policy Choices and Technical Innovation, *Minerals and Energy*, 1:7–15.

Fischer, C. 2001. Read This Paper Later: Procrastination with Time–Consistent Preferences. *Journal of Economic Behavior and Organization*, (46)3 pp. 249–269.

Fischer, C., S. Kerr and M.A. Toman. 1998. Using Emissions Trading to Regulate U.S. Greenhouse Gas Emissions: An Overview of Policy Design and Implementation Issues, *National Tax Journal* v51, n3 (September 1998): 453–64.

Other Discussion and Working Papers:

Fischer, C. and S. Salant. 2012. Alternative Climate Policies and Intertemporal Emissions Leakage. RFF DP 12-16. (under review at *AER*)

Boehringer, C., C. Fischer, and K.E. Rosendahl. 2011. Cost-Effective Unilateral Climate Policy Design: Size Matters. (revise/resubmit at *JEEM*)

Fischer, C., R. Newell and L. Preonas. 2013. Environmental and Technology Policy Options in the Electricity Sector: Interactions and Outcomes.

Fischer, C. and T. P. Lyon. 2013. A Theory of Multi-Tier Ecolabels.

Fischer, C. and S. Salant. 2013. Limits to Limiting Emissions: Spatial Leakage, Intertemporal Leakage, and Negative Leakage.

Takeda, S., T. Arimura, H. Tamechika, C. Fischer, and A. K. Fox. 2011. Output-Based Allocation of Emissions Permits for Mitigating the Leakage and Competitiveness Issues for the Japanese Economy. RFF DP 11-40.

Fischer, C. and A. K. Fox. 2010. On the Scope for Output-based Rebating in Climate Policy RFF DP 10–69.

Fischer, C. and A. K. Fox. 2009. Combining Rebates with Carbon Taxes: Optimal Strategies for Coping with Emissions Leakage and Tax Interactions RFF DP 09–12.

Elmer, C.F. and C. Fischer. 2011. Designing Vehicle CO₂ Emission Standards: Uniform vs. Weight-based Standards.

Fischer, C. 2010. Imperfect Competition, Consumer Behavior, and the Provision of Fuel Efficiency in Light-Duty Vehicles. RFF DP 10–60.

Fischer, C. 2001. Rebating Environmental Policy Revenues: Output-Based Allocations and Tradable Performance Standards, RFF Discussion Paper 01–22.

Fischer, C. 2001. Read This Paper Even Later: Procrastination with Time–Inconsistent Preferences. RFF Discussion Paper 99–20.

Book Chapters, Reviews, and Reports:

Cosbey, A., S. Droege, C. Fischer, J. Reinaud, J. Stephenson, L. Weischer, and P. Wooders. 2012. A Guide for the Concerned: Guidance on the elaboration and implementation of border carbon adjustment. ENTWINED Policy Report 03 (November).

Fischer, C. 2011. Green Competitiveness. Prepared for the 8th Annual Research Conference of the European Commission DG of Economic and Financial Affairs (21st November 2011).

Fischer, C. 2011. Trade’s Growing Footprint. *Nature: Climate Change* 1: 146.

- Fischer, C. and Petros Mavroidis. 2010. Review of Global Warming and the World Trading System, by Gary Clyde Hufbauer, Steve Charnovitz, and Jisun Kim. *Journal of Economic Literature* 48 (3) (September).
- Fischer, C. and D. Sawyer. 2010. Better Together? The Implications of Linked Canada–US Allowance Trade and Comparable Climate Policies. CD Howe Institute Report.
- Fischer, C. and R. Newell. 2010. Comparing Environmental and Technology Policies for Climate Mitigation and Renewable Energy in Reeve, D., D. Dewees, and B.W. Karney, eds., *Current Affairs: Perspectives on Electricity Policy for Ontario*. University of Toronto Press.
- Fischer, C. 2009. Are Consumers or Fuel Economy Policies Efficient? in Sperling, Daniel and James S. Cannon, Eds., *Reducing Climate Impacts in the Transportation Sector*. Springer.
- Fischer, C. and C. Egenhofer. 2008. The Critical Role of Technology for International Climate Change Policy, in *Beyond Bali: Strategic Issues for the international climate change negotiations*, Brussels, Belgium: CEPS; and Washington, DC: Brookings Institution.
- Fischer, C. 2007. International Experience with Benefit–Sharing Instruments for Extractive Resources, RFF Report, May 2007.
- Fischer, C. 2005. Review of International Experience with Benefit Sharing Instruments, Report for The World Bank Group, Southeast Asia Division.
- McGuire, G. et al. 2005. Development of options for a vehicle feebate in Canada, Prepared for National Round Table on the Environment and the Economy. Ottawa, Ontario, Canada: Marbek Resource Consultants in association with Resources for the Future and Desrosiers Automotive Consultants
- Fischer, C. 2005. Technical innovation and design choices for emissions trading and other climate policies, in Bernd Hansjuergens, Ed., *Emissions Trading for Climate Policy: US and European Perspectives*, Cambridge University Press, UK.
- Fischer, C. 2005. Why the Supply Side Matters, Proceedings of the 2005 International Energy Program Evaluation Conference.
- Sawyer, D. and C. Fischer. 2005. Assessment of Distribution Systems in a NO_x and SO₂ Cross–border Cap–and–Trade Emissions–Trading Program, Report to Environment Canada. Ottawa: Marbek Associates.
- Fischer, C., I.W.H. Parry, F. Aguilar, and P. Jawahar. 2005. Corporate Codes of Conduct: Is Common Environmental Content Feasible? Report for the Foreign Investment Advisory Service of the World Bank Group. RFF Discussion Paper 05–09.
- Fischer, C., F. Aguilar, P. Jawahar, and R. Sedjo. 2005. Forest Certification: Toward Common Standards? Report for the Foreign Investment Advisory Service of the World Bank Group. RFF Discussion Paper 05–10.
- Fischer, C., F. Aguilar, P. Jawahar, and R. Sedjo. 2005. Forest certification: is a common environmental code of conduct feasible? In *Forestry: Economics and Environment*. Proceedings of the 35th annual Southern Forest Economics Workshop. Sun Joseph Chang/ Mike A. Dunn Eds. Baton Rouge, Louisiana. April 18–20, 2005.

- Fischer, C. 2004. CAFE Standards and Changes in Fleet Composition, Chapter 2 in C. Fischer, I. Parry, and W. Harrington, Economic Impacts of Tightening the Corporate Average Fuel Economy (CAFE) Standards, Report prepared for Environmental Protection Agency and National Highway Traffic Safety Administration.
- Sawyer, D., C. Fischer, and R. Newell. 2004. Case Study on Renewable Grid-Power Electricity Baseline Study and Economic Report, Final Report to National Round Table on Environment and Economy. Ottawa: Marbek Resource Consultants.
- Fischer, C., S. Hoffmann, and Y. Yoshino. 2004. Multilateral Trade Agreements and Market-based Environmental Policies, in Janet Milne, Kurt Deketelaere, Larry Kreiser, Hope Ashiabor, Ed., *Critical Issues in Environmental Taxation: International and Comparative Perspectives*, vol 1. Richmond, UK: Richmond Law and Tax Ltd.) pp. 363–384.
- Fischer, C. 2003. Economic Issues Related to Design of a Domestic Permit Trading System, in Chang, Chi-Cheng, Robert Mendelsohn and Daigee Shaw, eds., *Global Warming and the Asian Pacific*. Edward Elgar Ltd.
- Fischer, C. 2002. Commentary: Does the Monopolist Care about Resistance? in *Battling Resistance to Antibiotics and Pesticides: An Economic Approach*, R. Laxminarayan, ed. Washington, DC: RFF Press.
- Fischer, C. 2002. International Emissions Trading Design and Tax Shifting by Multinational Corporations, in Lawrence Kreiser, Ed., *Critical Issues in International Environmental Taxation*. Chicago: CCH Inc. pp. 481–502.
- Fischer, C., A. Krupnick, R. Morgenstern, K. Rolfe, B. Rufo and J. Logarta. 2002. Air Pollution Control Policy Options for Metro Manila, ADB Report. Manila, Philippines: Asian Development Bank. (Also RFF Discussion Paper 03–30.)
- Buist, H., Fischer, C., Michos, J., and Tegene, A. (1995) Purchase of Development Rights Programs and the Economics of Easements. USDA Agricultural Economic Report Number 718.

Policy Briefs:

- Eggert, H., C. Fischer and M. Greaker. 2011. Trade and Production Policies for Biofuels. ENTWINED Issue Brief 09. Stockholm 2011/09/01.
- Fischer, C. and H. Horn. 2010. Border Carbon Adjustments from a Trade Policy Perspective. ENTWINED Issue Brief 04. Stockholm 2010/16/09.
- Fischer, C. and L. Preonas. 2010. Do Overlapping Policies for Renewable Energy Work at Cross-Purposes? Clipore Policy Brief, 12 October.
- Fischer, C. 2009. Climate Policy and Emissions Leakage: Comparing the Options. ENTWINED Issue Brief. Stockholm 2009/15/09.
- Fischer, C. 2009. The Role of Technology Policies in Climate Mitigation, RFF Issue Brief 09–08.
- Fischer, C. and R. Morgenstern. 2009. US Industry and Cap-and-Trade: Designing Provisions to Maintain Domestic Competitiveness and Mitigate Emissions Leakage. Energy Security Initiative Policy Brief 09–06. Washington, DC: the Brookings Institution.

- Fischer, C. and R. Laxminarayan. 2009. Congestion And The Commons: What Happens When Some Resources Are Enclosed And Others Are Open Access? *Resources*, Fall (173): 16–18.
- Fischer, C. 2009. Let's Turn CAFE on its Head, RFF Issue Brief #09–06, May 2009.
- Fischer, C. and R. Morgenstern. 2009. Competitiveness, Emissions Leakage, and Climate Policy, RFF Weekly Policy Commentary, February 27, 2009.
- Fischer, C. and R. Morgenstern. 2008. Metrics for Evaluating Policy Commitments in a Fragmented World: The Challenges of Equity and Integrity Discussion Paper 08–17, Harvard Project on International Climate Agreements.
- Fischer, C. and R.G. Newell. 2008. What's the Best Way to Promote Green Power? Don't Forget the Emissions Price. *Resources*, Summer (169): 10–13.
- Fischer, C. Fischer, Craig Hanson, and William A. Pizer. 2008. Carbon Taxes and Cap-and-Trade Programs: Not Necessarily 'Either/Or' Washington, DC: WRI.
- Bean, M. and C. Fischer. 2008. Endangered Species: Progress and Pitfalls During Three Decades of Controversy, *Resources*, Fall/Winter (167): 23–27.
- Fischer, C. and C. Egenhofer. 2007. The Critical Role of Technology for International Climate Change Policy, Background Paper for High-Level Colloquium, Climate change: key actions for the crucial years ahead, European Climate Platform (ECP), an Initiative by Mistra's Climate Policy Research Programme (Clipore) and the Centre for European Policy Studies (CEPS). Brussels, Belgium: CEPS.
- Fischer, C. 2007. Americans, Cars, and Fuel Economy (and Economists). in *Consilience. Interdisciplinary Communications 2005/2006*, Willy Østreng, ed. Oslo: Center for Advanced Study at the Norwegian Academy of Science and Letters.
- Fischer, C., E. Muchapondwa, and T. Sterner. 2005. Shall We Gather 'round the Campfire? Zimbabwe's Approach to Conserving Indigenous Wildlife *Resources*, Summer (158): 12–15.
- Fischer, C. 2004. Balancing Mitigation and Technology Incentives in a Climate Policy Framework, in *Ending the Energy Stalemate: A Bipartisan Strategy to Address America's Energy Challenges*, Technical Appendix, Chapter 6. Washington, DC: National Commission on Energy Policy.
- Fischer, C. 2004. Flexibility Mechanisms for Fuel Economy Standards, in *Ending the Energy Stalemate: A Bipartisan Strategy to Address America's Energy Challenges*, Technical Appendix, Chapter 1. Washington, DC: National Commission on Energy Policy.
- Fischer, C. and P. Portney. 2004. Tradable CAFE Credits, *New Approaches on Energy and the Environment: Policy Advice for the President*, Richard D. Morgenstern and Paul R. Portney, Ed. Washington, DC: RFF Press.
- Laxminarayan, R. and C. Fischer. 2004. Keeping One Row Ahead of the Bugs: The Economics of Pest Resistance to Transgenic Crops, *Resources*, Fall/Winter (152): 5–8.
- Fischer, C. 2003. Trading in Endangered Species: Legal Sales versus Total Bans, *Resources*, Spring (150): 12–14.

- Fischer, C., S. Hoffmann, and Y. Yoshino. 2002. Sustainable Development: Trade and Environmental Agreements, RFF Sustainable Development Issue Brief No. 02–21.
- Fischer, C. 2001. International Offsets for Carbon Emissions and Tax Shifting By Multinational Corporations, RFF Climate Issue Brief 01–01.
- Fischer, C. 2000. Policy Choices for Innovation and the Environment, RFF Climate Issues Brief #20, also in *Climate Change Economics and Policy: an RFF Anthology*, Michael A. Toman, ed. 2001. Washington, DC: RFF Press.
- Fischer, C. and M. Toman. 1998. Environmentally and Economically Damaging Subsidies: Concepts and Illustrations, RFF Climate Issues Brief #14, also in *Climate Change Economics and Policy: an RFF Anthology*, Michael A. Toman, ed. 2001.
- Fischer, C., S. Kerr and M.A. Toman. 1998. Using Emissions Trading to Regulate U.S. Greenhouse Gas Emissions: Basic Policy Design and Implementation Issues, RFF Climate Issues Brief #10, also in *Climate Change Economics and Policy: an RFF Anthology*, Michael A. Toman, ed. 2001. Washington, DC: RFF Press.
- Fischer, C., S. Kerr and M.A. Toman (1998) Using Emissions Trading to Regulate U.S. Greenhouse Gas Emissions: Additional Policy Design and Implementation Issues, RFF Climate Issues Brief #11, also in *Climate Change Economics and Policy: an RFF Anthology*, Michael A. Toman, ed. 2001. Washington, DC: RFF Press.

GRANTS AND AWARDS

- Strengthening Efficiency and Competitiveness in the European Knowledge Economies (SEEK) Grant: Competitiveness impacts in the world with uneven carbon constraints— Examining the implications of the EU Emissions Trading Scheme on energy intensive industries. 2012-2014. Joint program with ZEW.
- MISTRA (Swedish Foundation for Strategic Environmental Research) Program Grant: Environment and Trade in a World of Interdependence (ENTWINED), Phase I 2007–9 (SEK 19M). Phase II 2010–2013 (SEK 34M). Joint program with partners at Columbia U., Gothenburg U., IFN, IISD, IVL, RFF, and Statistics Norway.
- MISTRA Program Grant: Instrument Design for Global Climate Mitigation (INDIGO), 2012–14 (SEK 24.5M). Joint program with Gothenburg University, IVL, and RFF.
- EPA GRANT (#83413401): Market Impacts and Distributional Consequences of Pollution Control Mechanisms. 10/2009–12/2012. (\$286K) With R. Newell and S. Anderson.
- Research Council of Norway, Fremtidens rene energisystem (RENERGI). Various projects with Statistics Norway partners.
- EPA/STAR Grant RD: Differentiating Passenger Vehicles by Fuel Economy: Strategic Incentives and the Cost–Effectiveness of Tradable CAFE Standards, 2008–9 (\$80K)
- MISTRA Program Grant: Emissions Trading and other Policies Instrument for Climate Change: Phase 2 (EPICC), 2007–2010. With D. Burtraw and R. Kopp.
- EPA RD–83285101: A Conceptual and Empirical Framework for Analyzing Information Disclosure Programs, 2006–8 (\$327K), with I. Parry, R. Newell and J. Siikamaki.

EPA –82925601: Workshops on Model Differences & SGM Model, 2006–7 (\$75K) with R. Morgenstern.

Robert Wood Johnson Foundation Grant: Extending the Cure–Phase II, 2007–10 (\$1,833K) with R. Laxminarayan.

MISTRA Foundation Program Grant: Emissions Trading in Climate Policy (ETIC), 2004–07 (\$103K) with D. Burtraw , R. Kopp, and R. Newell.

USDA #43–3AEM–4–80089: Spatial Management of Invasive Alien Species, 2004–07 (\$193K) with J. Sanchirico and H.J. Albers.

World Bank Grant: Feasibility of Corporate Codes of Environmental Conduct, 2004.

EPA/STAR Grant RD83099101: Rate-based Allocation Mechanisms for Market-based Environmental Policies: Interactions with Pre-Existing Taxes and Uncertainty, 2003–5.

PI, EPA Grant 829256–01–1: Policies for Encouraging Carbon–Reducing Technologies, 2002–4.

PI, EPA/STAR Grant R828628–01–0: Efficiency and Distributional Consequences of the Allocation of Tradable Emission Allowances, 2000–2.

Environmental Protection Agency Grant CX825715: Multinational Taxation and International Emissions Permit Trading, 1999–2000.

NRTEE: Ecological Fiscal Reform and Energy Case Study on Renewable Grid Power Electricity, 2004, with R. Newell and D. Sawyer.

EPA/NHTSA Grant 68–W–02–046: Environmental and Economic Implications of CAFE, 2002–2003, with I. Parry and W. Harrington.

Asian Development Bank, Technical Assistant Grant, Metro Manila Air Quality Improvement Loan, 2002, with A. Krupnick and R. Morgenstern.

Environmental Protection Agency Grant CX 82625301: Carbon Emissions and Technological Innovation, 1997–2000, with I. Parry and W. Pizer.

National Science Foundation Grant 9603135: Green Technology, 1999, with M. Toman.

Environmental Protection Agency Cooperative Agreement: Greenhouse Gas Trading Systems, 1998–2000.

Alexander von Humboldt Foundation, German Chancellor Scholarship, 2003 (declined).

Summer Institute in Behavioral Economics, University of California at Berkeley, sponsored by the Russell Sage Foundation, Summer, 1996.

Deutscher Akademischer Austausch Dienst (German Academic Exchange Service) scholarship, Universität Regensburg, Germany, Summer, 1992.

SELECTED RECENT PRESENTATIONS

Limits to Limiting GHG Emissions

- PAKT Conference, “The Green Growth Dilemma,” Berlin, Germany, November 16, 2012 (keynote)

Environmental and Technology Policy Options in the Electricity Sector: Interactions and Outcomes

- Swedish Environmental Protection Agency, Stockholm, January 17, 2013 (seminar)
- London School of Economics, London, UK, January 16, 2013 (seminar)
- “Power Generation and the Environment: Choices & Economic Trade-Offs,” symposium sponsored by the University of Wyoming, in Jackson, WY, October 2, 2012 (invited talk)
- WTO Public Forum 2012: Ideas Workshop on Renewable Energy Policies and Trade in Geneva, Switzerland, September 24, 2012 (invited talk)
- Fondazione Eni Enrico Mattei (FEEM), Venice, Italy, July 18, 2012 (seminar)
- Center for European Economic Research (ZEW) in Mannheim, Germany, July 2, 2012 (seminar)
- AERE Summer Conference, Asheville, NC, June 4, 2012 (sponsored session)

Combining Policies for Renewable Energy: Is the Whole Less than the Sum of Its Parts?

- UC-Santa Barbara Bren School "Community Colloquium," February 8, 2012
- UC-San Diego, “An International Conference on Renewable Energy in the U.S./China/E.U.: Technology, Trade and Policy,” February 3, 2012
- World Bank Energy Week, March 16, 2011

Alternative Climate Policies and Intertemporal Emissions Leakage

- CESifo workshop on the Green Paradox, Venice, Italy, July 20, 2012
- Colorado School of Mines, Department of Economics Seminar, April 20, 2012
- Gothenburg University, March 20, 2012
- Workshop on Biofuels Policies, Hafjell, Norway, March 19, 2012
- University of Arizona, Department of Economics Seminar, January 24, 2012
- UC-Santa Barbara, Bren School, Research Seminar in Economics, January 19, 2012
- ASSA Meetings, AEA Session on Carbon Leakage, Chicago, January 2012
- ENTWINED workshop, Stockholm, Sweden, October 21, 2011
- University of Alberta Department of Economics Seminar, September 28, 2011

Strategic technology policy for emission intensive, traded industries

- EAERE Annual Meeting, Prague, Czech Republic, June 30, 2012

Imperfect Competition, Consumer Behavior, and the Provision of Fuel Efficiency in Light-Duty Vehicles

- UC-Berkeley Energy Institute Seminar, February 16, 2012
- Triangle Seminar in Environmental Economics (Duke University, RTI, UNC, and NC State), November 10, 2011

Green Competitiveness

- European Commission, Directorate General for Economic and Financial Affairs (DG ECFIN) 8th Annual Research Conference, Brussels, November 21, 2011.

Carbon Tax and Carbon Leakage: Policy Options

- Fiscal Reform and Climate Protection: Considering a U.S. Carbon Tax, Resources for the Future, October 18, 2011

On the Role of Output-Based Rebating in Climate Policy

- Lecture in Environmental Policy Instruments, Gothenburg University, March 29, 2012
- EAERE Annual Conference, Rome, Italy, July 1, 2011

Some Economics of Carbon Leakage

- ENTWINED Policy Seminar “Emerging Trends in Sustainable Trade: In Search of Internationally Appropriate Policy Responses to Voluntary Sustainability Standards and Border Carbon Adjustments,” Stockholm, October 20, 2011

Emission Targets and the Real Business Cycle

- University of Arizona Workshop “Macro Economics and the Environment: Climate Change, Policy Design and Sustainability,” May 5, 2011

Cost-Effective Climate Policy Design: Size Matters

- UC-Davis Seminar in Resource Economics, April 13, 2011

Competing Environmental Labels

- EPA Workshop “Benefits of Environmental Information Disclosure,” Washington, DC, January 18, 2011

The Role of Trade and Competitiveness Measures in U.S. Climate Policy

- ASSA Meetings, AEA session “Critical Issues in National Climate Policy Design” January 9, 2011

OTHER SERVICE

Reviewer for *American Journal of Agricultural Economics*, *Biological Conservation*, *Choices*, *Climate Policy*, *Ecological Economics*, *Economic Inquiry*, *Energy Journal*, *Energy Policy*, *Environment and Development Economics*, *Environmental and Resource Economics*, *International Journal of Industrial Organization*, *Journal of Economic Behavior and Organization*, *Journal of Economics and Management Strategy*, *Journal of Political Economy*, *Journal of Environmental Economics and Management*, *Journal of Public Economic Theory*, *Journal of Public Economics*, *Journal of Regulatory Economics*, *Oryx*, *Resource and Energy Economics*, *Transnational Corporations*

Paper reviewer for AERE and EAERE summer conferences

Grant Reviewer for National Science Foundation, Norwegian Research Council, Transportation Research Board, Mistra Foundation, Genome Canada

Project Peer Reviewer for U.S. EPA, NRTEE, Center for Climate Strategies

External Examiner for Thesis Defenses:

Edwin Muchapondwa, Gothenburg University, 2002

Markus Herrmann, University of Montreal, 2008

Hiring and Promotion reviews, various universities

Hiring, Promotion, and Information Technology Committees, Resources for the Future

PERSONAL INFORMATION

Born October 7, 1968 in Ontario, Canada.

Citizenship: U.S. and Canadian (dual)

Languages: English (native)
French (mostly fluent, except for technical language)
German (proficient)
Italian (conversant)

Interests: Semi-professional singer/songwriter