

## PETER J. WILCOXEN

### ADDRESS

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### EDUCATION

- Ph.D. Economics, Harvard University, March 1989
- A.M. Economics, Harvard University, 1985
- B.A. Physics, Magna cum Laude, Phi Beta Kappa, University of Colorado, 1982

### PROFESSIONAL APPOINTMENTS

*Professor*, Department of Public Administration and Int'l Affairs, Syracuse University, 2015-present.  
*Ajello Professor in Energy and Environmental Policy*, Syracuse University, 2018-present.  
*Laura J. and L. Douglas Meredith Professor for Teaching Excellence*, Syracuse University, 2016-present.  
*Director*, Center for Environmental Policy and Administration, Syracuse University, 2005-present.  
*Senior Research Associate*, Center for Policy Research, Syracuse University, 2011-present.  
*Nonresident Senior Fellow*, The Brookings Institution, 1995-present.  
*Associate Professor*, Department of Public Administration, Syracuse University, 2003-2015.  
*Associate Professor*, Department of Economics, Syracuse University, 2003-2014.  
*Associate Professor*, Department of Economics, University of Texas at Austin, 1999-2003.  
*Assistant Professor*, Department of Economics, University of Texas, 1991-1999.  
*Visiting Fellow*, The Brookings Institution, July-December 1994.  
*Visiting Scholar*, Department of Economics, Harvard University, 1990-1991.  
*Senior Research Fellow*, Department of Economics, University of Melbourne, 1989-90.  
*Visiting Research Fellow*, Department of Economics, University of Melbourne, 1984-85.  
*Economist*, Southern California Edison Company, Summer 1984.  
*Economist*, Environmental Protection Agency, Summer 1983.

### TEACHING EXPERIENCE

Natural Resource Economics (G), Environmental Economics (G), Computational General Equilibrium (G), Economics for Public Decisions (G), Taxation (G, team-taught), Climate Change: Science, Perception and Policy (G, team-taught), Economics of Environmental Policy (G), Smart Grid: Security, Privacy and Economics (G, team-taught), Principles of Economics (U), Microeconomic Theory (U), Environmental and Natural Resource Economics (U), Public Economics (U, team-taught), First Year Forum (U), Junior Seminar in Energy and Its Impacts (U, team-taught), Capstone Seminar in Energy and Its Impacts (U, team-taught), Civic Engagement Action Plan Workshop (U).

### AWARDS

1. Fellow, National Academy of Public Administration, 2019-present.
2. Maxwell Core Subject Professor Award, Syracuse University, 2019. Given by the graduate students of the Department of Public Administration and International Affairs.
3. Maxwell Professor Citizenship Award, Syracuse University, 2018. Given by the graduate students of the Department of Public Administration and International Affairs.
4. Leslie A. Whittington Excellence in Teaching Award, Network of Schools of Public Policy, Affairs, and Administration (NASPAA), 2016.

## PETER J. WILCOXEN

5. Laura J. and L. Douglas Meredith Professor for Teaching Excellence, Syracuse University, 2016-.
6. Birkhead-Burkhead Teaching Excellence Award and Professorship, Syracuse University, 2013-2017.
7. Maxwell Citizen Award, Syracuse University, 2013. Given by the graduate students of the Department of Public Administration and International Affairs.
8. Birkhead-Burkhead Teaching Excellence Award and Professorship, Syracuse University, 2007-2011.
9. Inspiration Award, Chancellor's Public Engagement and Scholarship Initiative, Syracuse University, 2011.
10. Rapoport-King Award for supervising an outstanding honors student, University of Texas, Fall 1993.
11. Allyn Young Prize for Excellence in Teaching, Harvard University.

## PUBLICATIONS

### Books

1. *Double Dividend: Environmental Taxes and Fiscal Reform in the United States*, Cambridge, Massachusetts: MIT Press, 2013. (with Dale W. Jorgenson, Richard J. Goettle and Mun S. Ho)
2. *Climate Change Policy after Kyoto: Blueprint for a Realistic Approach*, Washington: Brookings Institution, 2002. (with Warwick J. McKibbin)
3. *Notes and Problems in Applied General Equilibrium Analysis*, Amsterdam: North-Holland, 1992. (with Peter B. Dixon, B. R. Parmenter and Alan A. Powell)

### Papers

1. "The Role of Border Carbon Adjustments in a U.S. Carbon Tax," *Climate Change Economics*, 9(1) 1840011 (41 pages), 2018. <http://dx.doi.org/10.1142/S2010007818400110>. (with Warwick J. McKibbin, Adele C. Morris and Weifeng Liu).
2. "Overview of the EMF 32 Study on U.S. Carbon Tax Scenarios," *Climate Change Economics*, 9(1) 1840002 (37 pages), 2018. <http://dx.doi.org/10.1142/S201000781840002X>. (with James McFarland, Allen A. Fawcett, Adele C. Morris and John M. Reilly).
3. "The Welfare Consequences of Taxing Carbon," *Climate Change Economics*, 9(1) 1840013 (39 pages), 2018. <http://dx.doi.org/10.1142/S2010007818400134>. (with Dale W. Jorgenson, Richard J. Goettle and Mun S. Ho).
4. "Carbon Taxes and Fiscal Reform in the United States," *National Tax Journal*, 68(1), pp. 121-138, March 2015. (with Dale W. Jorgenson, Richard J. Goettle and Mun S. Ho)
5. "The Potential Role of a Carbon Tax in U.S. Fiscal Reform," *National Tax Journal*, 68(1), pp.139-156, March 2015. (with Warwick J. McKibbin, Adele C. Morris and Yiyong Cai)
6. "Pricing Carbon in the U.S.: A Model-Based Analysis of Power-Sector-Only Approaches," *Resource and Energy Economics*, 36(2014), pp. 130-150. (with Warwick J. McKibbin and Adele C. Morris)
7. "Market Equilibrium of Distribution Network with Alternative Energy Resources," *Proceedings of the 2013 IEEE International Conference on Smart Energy Grid Engineering (SEGE)*, IEEE, pp. 1-7, 2013. (with Mohammad Nikkhah Mojdehi and Prasanta Ghosh)
8. "An Econometric Approach to General Equilibrium Modeling," in Peter B. Dixon and Dale W. Jorgenson, (eds), *Handbook of Computational General Equilibrium Modeling*, Amsterdam: North-Holland, pp. 1133-1212, 2013. (with Dale W. Jorgenson, Hui Jin, and Daniel T. Slesnick)

9. "Energy, the Environment and U.S. Economic Growth," in Peter B. Dixon and Dale W. Jorgenson, (eds), *Handbook of Computational General Equilibrium Modeling*, Amsterdam: North-Holland, pp. 447-552, 2013. (with Dale W. Jorgenson, Richard J. Goettle and Mun S. Ho)
10. "A Global Approach to Energy and Environment: The G-Cubed Model," in Peter B. Dixon and Dale W. Jorgenson, (eds), *Handbook of Computational General Equilibrium Modeling*, Amsterdam: North-Holland, pp. 995-1068, 2013. (with Warwick J. McKibbin)
11. "Subsidizing Household Capital: How Does Energy Efficiency Policy Compare to a Carbon Tax?" *Energy Journal*, 32(Special Issue), pp. 111-128, 2011. (with Adele Morris and Warwick J. McKibbin)
12. "Comparing Climate Commitments: A Model-Based Analysis of the Copenhagen Accord," *Climate Change Economics*, 2(2), pp.79-103, May 2011. (with Adele Morris and Warwick J. McKibbin)
13. "The Distributional Impact of Climate Policy," *Berkeley Electronic Journal of Economic Analysis and Policy*, 10(2), Article 17, 2010. (with Dale W. Jorgenson, Richard J. Goettle, Mun S. Ho and Daniel T. Slesnick) Reprinted in *Distributional Aspects of Energy and Climate Policy*, Mark Cohen, Don Fullerton and Robert Topel, (eds), Edward Elgar, forthcoming in 2012.
14. "Information Disclosure Policy: Do State Data Processing Efforts Help More Than the Information Disclosure Itself?," *Journal of Policy Analysis and Management*, 29(1), pp. 163-182, 2010. (with Hyunhoe Bae and David Popp)
15. "Uncertainty and Climate Change Policy Design," *Journal of Policy Modeling*, 31(3), pp. 463-477, May-June 2009. (with Warwick J. McKibbin)
16. "Cap and Trade Climate Policy and US Economic Adjustments," *Journal of Policy Modeling*, 31(3), pp. 362-381, May-June 2009. (with Dale Jorgenson, Richard Goettle and Mun Sing Ho)
17. "The Economic and Environmental Effects of Border Tax Adjustments for Climate Policy," in Lael Brainerd and Isaac Sorkin, (eds), *Climate Change, Trade and Competitiveness*, The Brookings Institution, pp. 1-34, 2009. (with Warwick J. McKibbin)
18. "Expecting the Unexpected: Macroeconomic Volatility and Climate Policy," in Joseph Aldy and Robert Stavins (eds), *Post-Kyoto International Climate Policy: Implementing Architectures for Agreement*, Cambridge University Press, pp. 857-886, 2009. (with Warwick McKibbin and Adele Morris)
19. "US Labor Supply and Demand in the Long Run," *Journal of Policy Modeling*, 30(2008) 603-618. (with Dale W. Jorgenson, Richard J. Goettle, Mun S. Ho and Daniel T. Slesnick)
20. "China Can Grow and Still Help Prevent the Tragedy of the CO2 Commons," in Ligang Song and Wing Thyee Woo (eds), *China's Dilemma: Economic Growth, the Environment and Climate Change*, ANU E Press and Asia Pacific Press, pp. 190-225, 2008. (with Warwick J. McKibbin and Wing Thyee Woo)
21. "A Practical Approach To Individual Thermal Comfort and Energy Optimization Problem," *2008 Annual Meeting Of The North American Fuzzy Information Processing Society, Vols 1 and 2*, pp. 330-335, 2008. (with S. Ari, H.E. Khalifa, J.F. Dannenhoffer and C. Isik)
22. "A Credible Foundation for Long Term International Cooperation on Climate Change," in Joseph Aldy and Robert Stavins (eds), *Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World*, Cambridge University Press, pp. 185-208, 2007. (with Warwick McKibbin)
23. "Generating a Fuzzy Logic System from Optimized Numerical Models," *NAFIPS 2007 - 2007 Annual Meeting of the North American Fuzzy Information Processing Society Proceedings*, pp. 452-457, 2007. (with S. Ari, H.E. Khalifa, J.F. Dannenhoffer and C. Isik)

24. "Fuzzy logic and neural network approximation to indoor comfort and energy optimization" *NAFIPS 2006 - 2006 Annual Meeting of the North American Fuzzy Information Processing Society, Proceedings Vols 1 and 2*, pp. 692-695, 2006. (with S. Ari, H.E. Khalifa, J.F. Dannenhoffer and C. Isik)
25. "Constrained Fuzzy Logic Approximation for Indoor Comfort and Energy Optimization", 24th *International Conference of the North American Fuzzy Information Processing Society (NAFIPS 2005) Proceedings*, Ann Arbor, Michigan, June 2005. (with S. Ari, I.A. Cosden, E.H. Khalifa, J., Dannenhoffer and C. Isik)
26. "Estimates of the Costs of Kyoto-Marrakesh versus the McKibbin-Wilcoxon Blueprint," *Energy Policy*, 32(4), pp. 467-479, March 2004. (with Warwick J. McKibbin)
27. "Economic Modelling of Global Climate Change," in Owen, Anthony D. and Nick Hanley (eds.), *The Economics of Climate Change*, Routledge, pp. 166-192, 2004. (with Warwick J. McKibbin)
28. "Climate Policy and Uncertainty: The Role of Adaptation versus Mitigation," in *Living With Climate Change: Proceedings of a National Conference on Climate Change Impacts and Adaptation*, National Academies Forum, Canberra (ISBN 1875618767), 2003. (with Warwick McKibbin)
29. "Reply to Michealowa on Climate Change Policy," *Journal of Economic Perspectives*, 17(3), pp. 205-206, 2003. (with Warwick J. McKibbin)
30. "The Role of Economics in Climate Change Policy," *Journal of Economic Perspectives*, 16(2), pp. 107-129, Spring 2002. (with Warwick J. McKibbin) Reprinted in *Economics of the Environment: Selected Readings*, Robert N. Stavins, (ed.), Norton, 2005.
31. "The Economic Impact of Fundamental Tax Reform," in G. Zodrow and P. Mieskowski (eds.), *United States Tax Reform in the 21st Century*, Cambridge, Cambridge University, pp. 55-88, 2002. (with Dale W. Jorgenson).
32. "What's wrong with the Kyoto protocol? There is a better policy for addressing global climate change," in D.J. Eaton, (ed.) *Global Warming and the Kyoto Accord: What Is To Be Done?*, Austin, University of Texas at Austin, pp. 79-85, 2001.
33. "The Cost of Capital and The Economics of the Environment," in L. J. Lau (ed.), *Econometrics and the Cost of Capital*, MIT Press, pp. 379-405, 2000.
34. "Beyond the Kyoto Protocol", in Lo, F. Tokuda H., and N. Cooray (eds.) *The Sustainable Future of the Global System III*, United Nations University Press, Tokyo, pp. 101-108, 2000. (with Warwick J. McKibbin)
35. "The Role of International Permit Trading in Climate Change Policy," *Oxford Energy Forum*, pp. 4-6, May 2000. (with Warwick J. McKibbin)
36. "Emissions Trading, Capital Flows and the Kyoto Protocol", *Energy Journal*, pp. 287-334, May 1999. (with Warwick J. McKibbin, Martin Ross and Robert Shackleton)
37. "What to Expect from an International System of Tradable Permits for Carbon Emissions," *Resource and Energy Economics*, 21(3-4), pp. 319-46, 1999. (with Warwick J. McKibbin and Robert Shackleton)
38. "An Econometric Look at the Double Dividend Hypothesis," *National Tax Association Proceedings 1998*, pp. 57-62, 1999. (with Sugandha D. Tuladhar)
39. "The Theoretical and Empirical Structure of the G-Cubed Model," *Economic Modelling*, 16(1999), pp. 123-148, 1999. (with Warwick J. McKibbin)

40. "Environmental Policy and International Trade" in S. Mahendrarajah, A. J. Jakeman and M. McAleer (eds.), *Modelling Change in Integrated Economic and Environmental Systems*, Wiley, pp. 339-367, 1999. (with Warwick J. McKibbin).
41. "Permit Trading Under the Kyoto Protocol and Beyond," in Lo, F., Matsushita K, and H Takagi (eds.), *The Sustainable Future of the Global System II*, Tokyo: The United Nations University Press, pp 31-52, 1999. (with Warwick J. McKibbin)
42. "The Potential Effects of International Carbon Emissions Permit Trading Under the Kyoto Protocol" in *Economic Modelling of Climate Change*, OECD Workshop Report, OECD Paris. pp. 49-79, 1998. (with Warwick J. McKibbin and Robert Shackleton)
43. "Fundamental U.S. Tax Reform and Energy Markets," *The Energy Journal*, 18(3), pp. 1-30, 1997. (with Dale W. Jorgenson)
44. "The Long-Run Dynamics of Fundamental Tax Reform," *American Economic Review*, 87(2), pp. 126-132, May 1997. (with Dale W. Jorgenson).
45. "The Effects of Fundamental Tax Reform and the Feasibility of Dynamic Revenue Estimation," in Joint Committee on Taxation, *Joint Committee on Taxation Tax Modeling Project and 1997 Tax Symposium Papers* (JCS-21-97), U.S. Government Printing Office, November 20, 1997. (with Dale W. Jorgenson)
46. "Global Economic Prospects: Medium Term Projections and Structural Change," in *The Sustainable Future of the Global System*, Tokyo: The United National University, 1997. (with Philip Bagnoli and Warwick J. McKibbin)
47. "The Role of Services in Modeling the Global Economy." *Asia-Pacific Economic Review*, 2(2), 1996. (with Warwick J. McKibbin)
48. "The Economic Implications of Greenhouse Gas Policy," in H. Edward English and David Runnalls (eds.), *Environment and Development in the Pacific: Problems and Policy Options*, Addison-Wesley, pp. 8-34, 1996. (with Warwick J. McKibbin)
49. "Future Projections and Structural Change," in N. Nakicenovic, W.D. Nordhaus, R. Richels and F.L. Toth (eds.), *Climate Change: Integrating Science, Economics, and Policy*, Laxenburg, Austria: International Institute for Applied Systems Analysis, pp. 181-206, 1996. (with Philip Bagnoli and Warwick J. McKibbin)
50. "Intertemporal Equilibrium Modeling of Energy and Environmental Policies," in P.-O. Johanssen, B. Kristom and K.G. Mahler, (eds.), *Current Issues in Environmental Economics*, New York: Manchester University Press, pp. 171-191, 1995. (with Dale W. Jorgenson)
51. "Reducing US Carbon Dioxide Emissions: An Assessment of Alternative Instruments," *Journal of Policy Modeling*, 15(5-6), pp. 491-520, Oct-Dec 1993. (with Dale W. Jorgenson)
52. "Reducing US Carbon Emissions: An Econometric General Equilibrium Assessment," *Resource and Energy Economics*, 15(1), pp. 7-26, March 1993. (with Dale W. Jorgenson)
53. "Supply Elasticities in the Presence of Adjustment Costs," *Journal of Policy Modeling*, 15(1), pp. 91-97, 1993.
54. "The Economic Impact of the Clean Air Act Amendments of 1990," *The Energy Journal*, 14(1), pp. 159-182, 1993. (with Dale W. Jorgenson)
55. "Macroeconomic Modeling and the Assessment of Climate Change Impacts," in Y. Kaya, *et al.*, (eds.), *Costs, Impacts, and Benefits of CO2 Mitigation*, Laxenburg, Austria: International Institute for Applied Systems Analysis, pp. 107-132, 1993. (with Joel D. Scheraga, Neil A. Leary, Richard J. Goettle and Dale W. Jorgenson)

56. "The Global Consequences of Regional Environmental Policies: An Integrated Macroeconomic Multi-Sectoral Approach," in Y. Kaya, *et al.*, (eds.), *Costs, Impacts, and Benefits of CO2 Mitigation*, Laxenburg, Austria: International Institute for Applied Systems Analysis, pp. 247-272, 1993. (with Warwick J. McKibbin)
57. "The Economic Effects of a Carbon Tax." in Stephen L. McDonald and Mina Mohammadioun (eds.), *The Role of Natural Gas in Environmental Policy*, Austin: University of Texas Bureau of Business Research, 1993. Reprinted in Lee, Henry (ed.), *Shaping National Responses to Climate Change: A Post-Rio Guide*, Washington: Island Press, pp. 237-260, 1995. (with Dale W. Jorgenson)
58. "Energy Prices, Productivity and Economic Growth," in R.H Socolow, D. Anderson and J. Harte, (eds.), *Annual Review of Energy and the Environment*, Vol. 18, Palo Alto: Annual Reviews Inc., pp. 343-95, 1993. (with Dale W. Jorgenson)
59. "Energy, the Environment and Economic Growth," in Allen V. Kneese and James L. Sweeney (eds.), *Handbook of Natural Resource and Energy Economics*, Vol. 3, Amsterdam: North-Holland, pp. 1267-1349, 1993. (with Dale W. Jorgenson)
60. "The Global Costs of Policies to Reduce Greenhouse Gas Emissions," *Tokyo Club Papers*, 6(2), pp. 7-40, 1992. (with Warwick J. McKibbin)
61. "Carbon Taxes and Economic Welfare," *Brookings Papers on Economic Activity*, Microeconomics Issue, pp. 393-431, 1992. (with Dale W. Jorgenson and Daniel T. Slesnick)
62. "General-Purpose Software for Intertemporal Economic Models," *Computer Science in Economics and Management*, 5(1), pp. 57-79, February 1992. (with George Codsí and K.R. Pearson)
63. "Reducing US Carbon Dioxide Emissions: The Cost of Different Goals," in John R. Moroney (ed.), *Advances in the Economics of Energy and Resources: Energy, Growth and the Environment*, Vol. 7, Greenwich, CT: JAI Press, 1992, pp. 125-158. (with Dale W. Jorgenson)
64. "The Effects of Fiscal Restraint on the Australian Economy as Projected by the Murphy and MSG2 Models: A Comparison," *The Economic Record*, June 1991. (with Bruce F. Parsell and Alan A. Powell)
65. "Global Change, Energy Prices, and U.S. Economic Growth," *Structural Change and Economic Dynamics*, 3(1), pp. 135-154, 1991. (with Dale W. Jorgenson)
66. "Intertemporal General Equilibrium Modeling of U.S. Environmental Regulation," *Journal of Policy Modeling*, 12(4), pp. 715-744, Winter 1990. (with Dale W. Jorgenson)
67. "Environmental Regulation and U.S. Economic Growth," *The Rand Journal of Economics*, 21(2), pp. 314-340, Summer 1990. (with Dale W. Jorgenson)
68. "Coastal Erosion and Sea Level Rise: Implications for Ocean Beach and San Francisco's Westside Sewer Transport Project," *Coastal Zone Management Journal*, 14(3), pp. 173-191, 1986.

### Opinion Pieces

1. "A Proposal to Integrate Price Mechanisms Into International Climate Negotiations," *Asia and the Pacific Policy Studies*, 1(3), pp. 600-608, 2014. (with Warwick J. McKibbin and Adele C. Morris)
2. "China's Carbon Tax Highlights the Need for a New Track of Climate Talks," *East Asia Forum*, March 19, 2013. (with Warwick J. McKibbin and Adele Morris)
3. "Time for a Price Collar on Carbon," *politico.com*, July 24, 2009. (with Warwick J. McKibbin and Adele Morris)

4. “Managing Price and Targets: Why a Hybrid Policy is Better for Australia,” in *Climate Change: Getting It Right*, Committee for the Economic Development of Australia, pp. 76-85, 2007. (with Warwick J. McKibbin)
5. “Better Climate Change Options,” *Australian Financial Review*, August 2, 2004. (with Warwick J. McKibbin)
6. “Climate Change After Kyoto,” *Brookings Review*, pp. 6-10, Spring 2002. (with Warwick J. McKibbin)
7. “A Practical and Sustainable Policy for Climate Change,” *New Economy*, 9(3), 2002. (with Warwick J. McKibbin)
8. “Until We Know More About Global Warming, the Best Policy Is a Highly Flexible One,” *The Chronicle of Higher Education*, 45(43), pp. B4-5, July 2, 1999. (with Warwick J. McKibbin)
9. “The Next Step for Climate Change Policy,” *Brookings Institution Background Paper*, December 1999. Reprinted as “Building a Better Kyoto” in *Best American Political Writing 2002*, R. Flippin (ed.), Thunder’s Mouth Press, and in *Writing Across the Curriculum: A Prentice Hall Reader*, 2006. (with Warwick J. McKibbin)
10. “How to Cut Use of Fossil Fuel,” *Australian Financial Review*, p. 17, March 20, 1997. (with Warwick J. McKibbin)

#### **POLICY BRIEFS AND DISCUSSION PAPERS:**

1. “Global Economic and Environmental Outcomes of the Paris Agreement,” Discussion Paper, The Brookings Institution, January 2019. (with Weifeng Liu, Warwick J. McKibbin, and Adele Morris)
2. “Climate Change and Monetary Policy: Dealing with Disruption,” Policy Brief, The Brookings Institution, November 2017. (with Warwick J. McKibbin, Adele Morris and Augustus J. Panton)
3. “Pricing Carbon,” Policy Brief, The Brookings Institution, November 2015. (with Warwick J. McKibbin and Adele Morris)
4. “A Climate Diplomacy Proposal: Carbon Pricing Consultations,” Policy Brief, Harvard Project on Climate Agreements, Belfer Center for Science and International Affairs, Harvard Kennedy School, February 2013. (with Warwick J. McKibbin and Adele Morris)
5. “Achieving Comparable Effort through Carbon Price Agreements,” *Policy Brief, Harvard Project on International Climate Agreements*, Belfer Center for Science and International Affairs, Harvard Kennedy School, December 18, 2009. (with Warwick J. McKibbin and Adele Morris)
6. “Consequences of Alternative U.S. Cap-and-Trade Policies: Controlling Both Emissions and Costs,” *Policy Brief*, The Brookings Institution, July 2009. (with Warwick J. McKibbin, Adele Morris and Yiyong Cai).
7. “Building on Kyoto: Towards A Realistic Global Climate Agreement,” *Brookings Policy Brief 08-01*, November 2008. (with Warwick J. McKibbin).
8. “The Next Step for Climate Change Policy After COP5,” *Brookings Background Paper no 1*, February 2000. (with Warwick J. McKibbin)
9. “Salvaging the Kyoto Climate Change Negotiations,” *Brookings Institution Policy Brief*, No. 27, November 1997. (with Warwick J. McKibbin)
10. “A Better Way to Slow Global Climate Change,” *Brookings Institution Policy Brief*, No. 17, June 1997. (with Warwick J. McKibbin)

**OTHER REPORTS AND WORKING PAPERS:**

1. “SAB Advice on the Use of Economy-Wide Models in Evaluating the Social Costs, Benefits, and Economic Impacts of Air Regulations,” September 2017, EPA-SAB-17-012, U.S. Environmental Protection Agency. (Panel chair and lead author, with 21 coauthors)
2. “China’s Carbon Future: A Model-Based Analysis,” Brookings Climate and Energy Economics Discussion Paper, December 2015. (With Warwick J. McKibbin and Adele C. Morris)
3. “Controlling Carbon Emissions from U.S. Power Plants: How a Tradable Performance Standard Compares to a Carbon Tax,” Brookings Climate and Energy Economics Discussion Paper, August 2015. (With Warwick J. McKibbin and Adele C. Morris)
4. “Incorporating Privacy and Trust into Models of Resource-Constrained Cyber-Physical Systems,” January 2015. (with Steve J. Chapin, Yuhong Liu, Bruce McMillin, Wendy Seltzer, and Donald C. Wunsch)
5. “The Economic Consequences of Delay in U.S. Climate Policy,” Brookings Climate and Energy Economics Discussion Paper, June 2014. (with Warwick J. McKibbin and Adele C. Morris)
6. “Bridging the Gap: Integrating Price Mechanisms into International Climate Negotiations,” Brookings Climate and Energy Economics Discussion Paper, December 2012. (with Warwick J. McKibbin and Adele C. Morris)
7. “Analysis of the American Clean Energy and Security Act of 2009”, Report to the US Environmental Protection Agency, 2009. (with Richard J. Goettle, Dale W. Jorgenson and Mun S. Ho)
8. “Analysis of the Waxman-Markey Discussion Draft: The American Clean Energy and Security Act of 2009,” Report to the US Environmental Protection Agency, 2009. (with Richard J. Goettle, Dale W. Jorgenson and Mun S. Ho)
9. “Analysis of Branch Circuit Current in JPMC Data Centers CDC-1 and Basingstoke Hall A”, Report to JP Morgan Chase, March 2009. (with Becky Lafrancois)
10. “Analyzing Environmental Policies with IGEM, an Intertemporal General Equilibrium Model of U.S. Growth and the Environment,” Report to the US Environmental Protection Agency, 2009. (with Dale W. Jorgenson, Richard J. Goettle, Mun S. Ho and Daniel T. Slesnick)
11. “The Economic Costs of a Market-based Climate Policy,” Report to the Pew Center on Global Climate Change, June 2008. (with Dale W. Jorgenson, Richard J. Goettle and Mun S. Ho)
12. “Analysis of the Lieberman-Warner Climate Security Act of 2008,” Report to the US Environmental Protection Agency, 2008. (with Richard J. Goettle, Dale W Jorgenson and Mun S. Ho)
13. “Analysis of the Low Carbon Economy Act of 2007”, Report to the U.S. Environmental Protection Agency, 2008. (with Richard J. Goettle, Dale W Jorgenson and Mun S. Ho)
14. “Analysis of the Climate Stewardship and Innovation Act of 2007,” Report to the U.S. Environmental Protection Agency, 2007. (with Richard J. Goettle, Dale W Jorgenson and Mun S. Ho)
15. “IGEM, an Intertemporal General Equilibrium Model of the US Economy with Emphasis on Growth, Energy and the Environment,” report to the US Environmental Protection Agency, Office of Atmospheric Programs, Climate Change Division, July 2007. (with Richard J. Goettle, Mun S. Ho, Dale W. Jorgenson and Daniel T. Slesnick)
16. “Energy and U.S. Economic Growth in the next Thirty Years: The Role of Information Technology and Technical Change,” Report to the US National Renewable Energy Laboratory, 2004. (with Dale W. Jorgenson and Mun S. Ho)



17. "The Effects of a Proposed Free Trade Agreement of the Americas," Report to the US Environmental Protection Agency, June 2003. (with Warwick J. McKibbin)
18. "The Global Costs of Policies to Reduce Greenhouse Gas Emissions," Report to the US Environmental Protection Agency on Cooperative Agreement CR824259, mimeo, January 1999. (with Warwick J. McKibbin) *Note: this report is on the second phase of the project described in the 1994 report with the same title.*
19. "Social Cost Energy Pricing, Tax Recycling, and Economic Change," Report to the US Environmental Protection Agency's Office of Atmospheric Programs, Climate Change Division, 1995. (with D.W. Jorgenson, R.J. Goettle, D.E. Gaynor, and D.T. Slesnick)
20. "The Global Costs of Policies to Reduce Greenhouse Gas Emissions," Report to the US Environmental Protection Agency on Cooperative Agreement CR818579, December 1994. (with Warwick J. McKibbin)
21. "The Efficiency Value of Carbon Tax Revenues," Energy Modeling Forum Working Paper 12.8, The Energy Modeling Forum, Stanford University, 1993. (With R. Shackleton, M. Shelby, A. Christofaro, R. Brinner, J. Yanchar, L. Goulder, D. Jorgenson, P. Pauly and R. Kaufman)
22. "The Clean Air Act and the U.S. Economy: Final Report of Results and Findings," Final Report to the US Environmental Protection Agency's Office of Policy, Planning and Evaluation, 1993. (Dale W. Jorgenson, Richard J. Goettle, Daniel E. Gaynor and Daniel T. Slesnick,)
23. "G-Cubed: A Dynamic Multi-Sector General Equilibrium Growth Model of the Global Economy," Brookings Institution Discussion Papers in International Economics, No. 98, November 1992. (with Warwick J. McKibbin)
24. "Constraining Output Responses in Long-run Closures of ORANI: Some Suggestions," Impact Project Preliminary Working Paper No. OP-70, University of Melbourne, May 1990. (with Mark Horridge and Alan A. Powell)
25. "Characteristics of Mining in Australia," Impact Project General Paper No. G-93, University of Melbourne, May 1990. (with Marco Bini)
26. "A Fast Algorithm for Solving Rational Expectations Models," Impact Project Preliminary Working Paper No. IP-47, University of Melbourne, April 1990.
27. "The Reconciliation of Applied General Equilibrium and Macroeconomics: Grounds for Hope?" Impact Project Preliminary Working Paper No. IP-44, University of Melbourne, December 1989. (with Bruce F. Parsell and Alan A. Powell)
28. "Intertemporal Optimization in General Equilibrium: A Practical Introduction," Impact Project Preliminary Working Paper No. IP-45, University of Melbourne, December 1989.
29. "Investment with Foresight in General Equilibrium," Impact Project Working Paper IP-35, University of Melbourne, November 1987.
30. "Computable Models of Investment with Foresight," Department of Economics Research Paper No. 138, University of Melbourne, November 1985.
31. "Numerical Methods for Investment Models with Foresight," Impact Project Preliminary Working Paper No. IP-23, University of Melbourne, July 1985.

## RESEARCH GRANTS

1. Alcoa Foundation, "Understanding the Potential Outcomes of the Paris Climate Accord," 2017-2018. (with Adele Morris and Warwick McKibbin).

2. Alex C. Walker Foundation, “Analysis of How Monetary Policy Can Affect the Macroeconomic Outcomes of a U.S. Carbon Tax,” 2016-2017. (with Adele Morris and Warwick McKibbin).
3. US National Science Foundation Grant 1245867, “Cybersecurity Risks Of Dynamic, Two-Way Distributed Electricity Markets,” 2016-2018. (with Jason Dedrick, Steven Chapin and Keli Perrin)
4. Maxwell School, Syracuse University, “Citizenship and Climate Change,” 2016-2017. (with Farhana Sultana, Catherine Gerard, and Sarah Pralle).
5. Alex C. Walker Foundation, “Analysis of How a US Carbon Tax Could Affect Patterns of Trade, Investment, and Emissions Internationally,” 2015-2016. (with Adele Morris and Warwick McKibbin).
6. Alex C. Walker Foundation, “A Comparison of a Carbon Tax to Other Regulatory Approaches to Control Carbon Pollution from Electric Power Plants,” 2014-2015. (with Adele Morris and Warwick McKibbin).
7. Alcoa Foundation, “China’s Carbon Future,” 2013-2015. (with Adele Morris and Warwick McKibbin).
8. Moynihan Institute, Maxwell School, “Building Community Capacity to Adapt to Climate Change across Sites, Groups and Scales,” 2014. (with Farhana Sultana, Catherine Gerard, A. Peter Castro, Sarah Pralle and Paul Hirsch).
9. Alex C. Walker Foundation, “The Potential Role of a Carbon Tax in Reducing the U.S. Budget Deficit,” 2013-2014. (with Adele Morris and Warwick McKibbin).
10. US Department of Energy Award DE-PI0000005, “Climate and Energy Economic Policy Research,” administered through the Brookings Institution, 2010-2011. (with Adele Morris and Warwick McKibbin).
11. Syracuse University Chancellor’s Leadership Fund, “Storing Carbon in Rangeland Soils to Mitigate Global Climate Change,” 2009-2011. (with David Driesen, Mark Ritchie and Jane Read)
12. Edison Electric Institute, “Economic Modeling of Climate Change Policy,” Administered through the Brookings Institution, 2009. (with Warwick McKibbin and Adele Morris)
13. JP Morgan Chase, “Data Center Optimization - Green Data Centers/Data Center Dashboard”, 2008.
14. Observer Research Foundation, “ORF-Brookings Economic Modeling Project,” 2005-2008. (with Warwick McKibbin)
15. Hitachi Research Institute, “Hokkaido Project”, Administered through the Brookings Institution, 2008. (with Warwick McKibbin).
16. US Environmental Protection Agency grant XA-83242601-0, “Climate Policy Without Cost? Can Technology Solve the Climate Problem?” an Environmental and Resource Economics Workshop, July 2006. (with David Popp)
17. US Environmental Protection Agency Cooperative Agreement, “The Effect of Free Trade Agreements on International Capital Flows and Environmental Quality,” 2002-2003. Administered through the Brookings Institution. (with Warwick J. McKibbin)
18. US Department of Energy contract on “Econometrics of Energy Demand and Technological Change,” 1998. Administered through Lawrence Berkeley National Laboratory. (with Alan Sanstad)
19. US Geological Survey Western Regional Grants Program, “Value Assessments in Surface Water Transfers: Deterministic and Stochastic Issues for Buyers, Sellers and Third Parties,” 1997-2000 Administered through the LBJ School of Public Affairs. (with David Eaton and Al Utton)

20. US Department of Energy contract on “Structural Models of Long-Term Energy Demand: Understanding the Long-Term Prospects for Carbon Dioxide Emissions,” 1995-1997. Administered through Lawrence Berkeley National Laboratory. (with Lorna Greening, Lee Schipper and Alan Sanstad)
21. US Environmental Protection Agency Cooperative Agreement CR824259, “The Global Cost of Policies to Reduce Greenhouse Gas Emissions,” June 1995 to October 1998. Supplements NSF Grant SBR-9321010. Administered through the Brookings Institution. (with Warwick J. McKibbin)
22. US National Science Foundation Grant SBR-9321010, “The Global Cost of Policies to Reduce Greenhouse Gas Emissions,” March 1995-April 1998. Administered through the Brookings Institution. (with Warwick J. McKibbin)
23. US Environmental Protection Agency Cooperative Agreement CR818579, “The Global Cost of Policies to Reduce Greenhouse Gas Emissions,” 1992-1994. Administered through the Brookings Institution. (with Warwick J. McKibbin)

## **PRESENTATIONS**

1. Seminar Presentation, Brookings Institution, June 2014.
2. Discussant, National Tax Association Spring Meeting, May 2014.
3. Contributed Paper, Association of Environmental and Resource Economists Conference, June 2013.
4. Seminar Presentation, Brookings Institution, July 2012.
5. Invited Speaker, International Climate Policy Workshop, Canberra, March 2012.
6. Invited Speaker, International Economics Association Conference, Beijing, July 2011.
7. Invited Speaker, Conference on Computational General Equilibrium, Washington, June 2011.
8. Invited Speaker, SUNY-ESF Sustainable Use of Renewable Energy Workshop, November 2010.
9. Invited Public Lecture, University of Indiana, October 2010.
10. Invited Public Lecture, OASIS, Syracuse, November 2009.
11. Invited Speaker, SUNY-ESF Sustainable Use of Renewable Energy Workshop, November 2009.
12. Seminar Presentation, Brookings Institution, June 2009.
13. Invited Speaker, conference on Climate Change: Global Risks, Challenges & Decisions, Copenhagen, March 2009.
14. Seminar Presentation, Department of Mechanical and Aerospace Engineering, Syracuse University, December 2008.
15. Invited Public Lecture, OASIS, Syracuse, October 2008.
16. Invited Public Lecture, Central New York Council for the Social Studies, Syracuse, October 2008.
17. Invited Speaker, Workshop on Climate Change, Trade and Competitiveness, the Brookings Institution, June 2008.
18. Invited Public Lecture, Le Moyne College and Syracuse University Intelligent Conversation Lecture Series, November 2007.
19. Invited Speaker, American Institute for Economic Research Conference on Global Climate Change, Great Barrington, Massachusetts, November 2007.
20. Organizer and Speaker, Workshop on Climate Policy Without Cost? Can Technology Solve the Climate Problem?, Washington, July 2006.
21. Invited Speaker, Workshop on Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World, Cambridge, May 2006.
22. Invited Speaker, Observer Research Foundation, Mumbai, July 2005.
23. Seminar Presentation, Australian National University, July 2004.
24. Invited Speaker, State University of New York College of Environmental Sciences and Forestry, April 2004.

25. Invited Speaker, Conference on the Economic Dynamics of Environmental Law, Syracuse, October 2003.
26. Invited Speaker, OECD Environment and Modeling Workshop, Ottawa, October 2003.
27. Invited Speaker, Joint Meeting of the Energy Modeling Forum and the International Energy Workshop, Laxenburg Austria, June 2001.
28. Invited Speaker, Japan-US Climate Change Workshop, Resources for the Future, Tokyo, May 2000.
29. Invited Speaker, University of Texas Conference on the Kyoto Protocol, Austin, March 2000.
30. Invited Speaker, Texas Comptroller's Seminar on Dynamic Tax Impact Analysis, Austin, February 1999.
31. Contributed Paper, National Tax Association Annual Conference, Austin, November 1998.
32. Invited Speaker, Japan-US Climate Change Workshop, Resources for the Future, Washington, October 1998.
33. Contributed Paper, Lonestars Conference, Austin, September 1998.
34. Invited Public Lecture, Electric Utility Marketing Managers of Texas Quarterly Meeting, Austin, September 1998.
35. Invited Speaker, Workshop on International Financial Flows, McLean, Virginia, August 1998.
36. Contributed Paper, NBER-Yale Workshop on Global Change, Snowmass, August 1998.
37. Contributed Paper, National Bureau of Economic Research Summer Institute, Cambridge, August 1998.
38. Invited Panelist, Conference on Global Economic Analysis, Purdue University, June 1998.
39. Contributed Paper, Lonestars Conference, College Station, September 1997.
40. Invited Speaker, Climate Change Roundtable, Center for Strategic and International Studies, Washington, July 1997.
41. Invited Speaker, Global Climate Change Workshop, The Annapolis Center, Annapolis, July 1997.
42. Invited Speaker, Resources for the Future Conference on Endogenous Technical Change, Washington, March 1997.
43. Invited Speaker, US Congress Joint Committee on Taxation Symposium on Modeling the Macroeconomic Consequences of Tax Policy, Washington, January 1997.
44. Contributed Paper, American Economic Association Annual Meetings, New Orleans, January 1997.
45. Invited Speaker, Council of Economic Advisors/EPA Workshop on Environmental Protection and Economic Productivity, Washington, December 1996.
46. Invited Speaker, Experts Modeling Forum in Support of Domestic US Greenhouse Gas Policy Analysis, Resources for the Future, Washington, November 1996
47. Instructor, Workshop on the Design and Analysis of Dynamic General Equilibrium Models, University of Colorado, Boulder, November 1996.
48. Contributed Paper, Lonestars Conference, Austin, September 1996.
49. Invited Speaker, US Government Interagency Climate Change Analysis Workshop, Springfield Virginia, June 1996.
50. Contributed Paper, Lonestars Conference, College Station, October 1995.
51. Invited Speaker, Conference on International Trade in Services, Brisbane, Australia, July 1995.
52. Instructor, Training Course on International Trade Modelling, Conference on International Trade in Services, Brisbane, Australia, July 1995.
53. Seminar Presentation, MIT Center for Energy and Environmental Policy Research, Cambridge, May 1995.
54. Contributed Paper, Murry S. Johnson Conference on Environmental Economics, The University of Texas, Austin, April 1995.
55. Seminar Presentation, Department of Energy, Energy Information Administration, Washington, December 1994.
56. Seminar Presentation, Brookings Institution, Washington, December 1994.
57. Invited Lecture, Conference on Health, the Environment and the Economy, Manship School of Mass Communication, Louisiana State University, Baton Rouge, November 1994.

58. Contributed Paper, International Association for Energy Economics Annual Meeting, Dallas, November 1994.
59. Plenary Speaker, NSF Japan-US Workshop on Global Climate Change Modeling and Assessment: Improving Methodologies and Strategies, Honolulu, October 1994.
60. Seminar Presentation, American Petroleum Institute, Washington, October 1994.
61. Seminar Presentation, International Trade Division, The World Bank, Washington, October 1994.
62. Invited Paper, Conference on Economic Issues Related to Trade and the Environment, University of Colorado, Boulder, April 1994.
63. Discussant, American Council for Capital Formation Conference on Tax Policy for Economic Growth in the 1990s, June 1993.
64. Invited Paper, Conference on the Cost of Capital in Economic Analysis, Kennedy School of Government, Harvard University, May 1993.
65. Invited Public Lecture, Graduate School of Public Health Colloquia Series, University of Pittsburgh, Pittsburgh, February 1993.
66. Contributed Paper, American Economic Association Annual Meetings, Anaheim, January 1993.
67. Invited Speaker, University of Texas, Bureau of Business Research Conference on The Role of Natural Gas in Environmental Policy, Austin, November 1992.
68. Contributed Paper, Third General Equilibrium Modeling Conference, Waterloo, Ontario, October 1992.
69. Contributed Paper, Conference on Computational Economics, Austin, May 1992.
70. Invited Speaker, Harvard Workshop on Environmental Taxes, Washington, May 1992.
71. Contributed Paper, Lonestars Conference, College Station, March 1992.
72. Contributed Paper, Southwestern Economics Association, Annual Meeting, San Antonio, March 1992.
73. Contributed Paper, Stanford University Energy Modeling Forum 12, Stanford, February 1992.
74. Contributed Paper, Brookings Conference on Microeconomics, Washington, December 1991.
75. Seminar Presentation, Argonne National Laboratory, Argonne, Illinois, September 1991.
76. Contributed Paper, Stanford University Energy Modeling Forum 12, Boulder, Colorado, August 1991.
77. Invited Address, Australian Applied General Equilibrium Modeling Conference, Melbourne, Australia, May 1991.
78. Invited Speaker, United Nations Environment Programme, Workshop on the Economic Analysis of Limiting Energy-Related Gas Emissions, Washington, April, 1991.
79. Contributed Paper, Stanford University Energy Modeling Forum 12, Washington, March 1991.
80. Contributed Paper, International Association for Energy Economics, New England Area Meeting, Spring 1991.
81. Invited Speaker, Harvard-Japan Workshop on Energy and the Environment, Tokyo, Japan, January 1991.
82. Contributed Paper, ORSA-TIMS (Operations Research Society of America) Annual Conference, Philadelphia, October 1990.
83. Contributed Paper, MIT-Tokyo Workshop on Economic/Energy/Environmental Modeling for Climate Policy Analysis, Washington, October 1990.
84. Contributed Paper, Stanford University Energy Modeling Forum 12, Stanford, August 1990.
85. Seminar Presentation, Australian National University, June 1990.
86. Invited Lecture, Industry Commission Economics Workshop, Canberra, Australia, December, 1989.
87. Seminar Presentation, University of Western Sydney, Department of Economics, October, 1989.
88. Contributed Paper, Fifth IASA Task Force Meeting on Applied General Equilibrium Modeling, Laxenburg Austria, August 1989.
89. Contributed Paper, Australian Economic Society Annual Meeting, Adelaide, Australia, July 1989.
90. Contributed Paper, Australian National University, Conference on Fiscal Policy and the Current Account, Canberra, Australia, June 1989.

91. Seminar Presentation, Reserve Bank of Australia, Economics Department, April 1989.

## REFEREEING

*American Economic Review, RAND Journal, Journal of Environmental Economics and Management, Journal of Policy Modeling, Scandinavian Journal of Economics, Economic Analysis and Policy, Resources and Energy, Computational Economics, Energy Journal, Economic Inquiry, Journal of Policy Analysis and Management, World Bank Economic Review, Journal of Comparative Economics, Environmental and Resource Economics, Resource and Energy Economics, National Science Foundation, MIT Press, North-Holland.*

## OTHER PROFESSIONAL ACTIVITIES

1. Syracuse University, Meredith Professorship Selection Committee, 2017-2018.
2. Syracuse University, Meredith Teaching Awards Selection Committee, 2017.
3. Maxwell School, Research Center Program Evaluation Committee, 2017-2018.
4. Maxwell School, Curriculum Committee, 2017-.
5. Maxwell School, Roscoe Martin Fellowship Committee, 2016.
6. Syracuse University, University Senate, 2015-2017.
7. US Environmental Protection Agency, Chartered Science Advisory Board, 2013-.
8. Department of Public Administration, MPA Committee Member, 2013-2017.
9. Syracuse University, Energy and Its Impacts Integrated Learning Major, Principal Advisor, 2012-.
10. Maxwell School, Citizenship and Civic Engagement Program Committee, 2012-.
11. Department of Economics, Undergraduate Advisor, 2004-2014.
12. Department of Economics, Teaching Evaluation Committee, 2007-2010, 2012-2014.
13. US Environmental Protection Agency, Environmental Economics Advisory Committee, 2007-2013.
14. Department of Public Administration, Faculty Search Committee, 2012-13.
15. Maxwell School, Roscoe Martin Fellowship Committee, 2010-2013.
16. Department of Public Administration, Executive MPA Committee Member, 2010-2013.
17. Maxwell School, Information and Computing Technology Advisory Committee, 2006-2013.
18. Maxwell School, Public Administration-International Relations Synthesis Committee Member, 2010.
19. Maxwell School, Undergraduate Signature Program Committee Member, 2010.
20. Member, EnSPIRE Committee, Syracuse University, 2003-2009.
21. Department of Public Administration, Strategic Planning Committee Chair, 2007-2008.
22. Syracuse University-SUNY ESF Joint Environmental Initiative, Co-Chair, 2006-2007.
23. Department of Public Administration, Governance Committee Chair, 2006-2007.
24. Department of Economics, Research Evaluation Committee, 2006-2007.
25. System Administrator, American Economic Association online services (*Directory of Members and Job Openings for Economists*), 1995-2003.
26. Department of Economics, Undergraduate Program Committee, University of Texas, 1993-2003.
27. Energy and Mineral Resources Graduate Studies Committee, University of Texas, 1992-2003.
28. Department of Economics, Computer Committee, University of Texas, 1992-2001.
29. Liberal Arts Instructional Technology Services Review Committee, 1999-2001.
30. Department of Economics, Graduate Advisor, 1999-2001.
31. Review Editor, Intergovernmental Panel on Climate Change, 1999-2000.
32. Department of Economics, Assistant Graduate Advisor, 1999.
33. Department of Economics, Graduate Admissions Committee, 1999.
34. Director's Review Panel, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory, 1998.
35. National Science Foundation Special Emphasis Panel on the Human Dimensions of Global Change, Spring-Summer 1995.

36. Convener, Workshop on Applied General Equilibrium Modeling, Department of Economics,  
University of Melbourne, 1989-1990.

**PROFESSIONAL ASSOCIATIONS**

American Economic Association  
Association for Public Policy Analysis and Management  
Association of Environmental and Resource Economists  
International Association for Energy Economics