

## **Carl Pasurka, Economist in EPA's [National Center for Environmental Economics](#)**

**Research Interests:** Productivity and competitiveness effects of environmental regulations; Environmental accounting; Computable general equilibrium modeling

**Biography:** Carl Pasurka has been an economist with the National Center for Environmental Economics at the U.S. Environmental Protection Agency since 1992. He also has been serving as an Adjunct Professor with the Schar School of Policy and Government at George Mason University since 2005. His current research focuses on cost and productivity issues associated with environmental regulations. In addition, he was an Associate Editor for the *Journal of Environmental Economics and Management* (1994-1996) and since 2013 has been an Associate Editor for *Energy Economics*. Prior to joining NCEE Carl was an Assistant Professor of Economics at Loyola University – Chicago (1985-1992) and was a Visiting Assistant Professor of Economics at Southern Illinois University – Carbondale (1981-1985). Carl has a PhD (1981) and MS (1977) in economics from the University of Illinois at Urbana-Champaign and a BS (1975) in economics from Northern Illinois University.

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### **Recent NCEE Working Papers:**

["Do Environmental Regulations Disproportionately Affect Small Businesses? Evidence from the Pollution Abatement Costs and Expenditures Survey,"](#) (with Ron Shadbegian and Randy Becker), NCEE Working Paper, #2012-06.

### **Peer-Reviewed Publications:**

“Pollution Abatement and Employment,” (with Rolf Färe and Shawna Grosskopf, and Ron Shadbegian) *Empirical Economics*, 54(1), pp. 259-295, February 2018.  
<https://doi.org/10.1007/s00181-016-1205-2>

“On Endogenizing Direction Vectors in Parametric Directional Distance Function-Based Models” (with Rolf Färe and Michael Vardanyan), *European Journal of Operational Research*, 262(1), pp. 361-369, 1 October 2017. <https://doi.org/10.1016/j.ejor.2017.03.040>

“Modeling Pollution Abatement Technologies as a Network,” (with Rolf Färe and Shawna Grosskopf) Chapter 3 (pp. 59-79) in *New Directions in Productivity Measurement and Efficiency Analysis: Counting the Environment and Natural Resources* (Editors: Samad Azad, Francesc Hernandez, and Tiho Ancev), Edward Elgar, 2017.  
<http://dx.doi.org/10.4337/9781786432421.00007>

[“Sources of Airline Productivity from Carbon Emissions: An Analysis of Operational Performance under Good and Bad Outputs,”](#) (with B. L. Lee, C. Wilson, H. Fujii and S. Managi), *Journal of Productivity Analysis*, 47(3), pp. 223-246, June 2017.

[“Technical Change and Pollution Abatement Costs,”](#) (with Rolf Färe and, Shawna Grosskopf), *European Journal of Operational Research*, 248(2), pp. 715-724, January 2016.

[The Good, the Bad and the Efficient: Productivity, Efficiency and Technical Change in the Airline Industry, 2004-2011”](#) (with Boon L. Lee and Clevo Wilson), *Journal of Transport Economics and Policy*, 49(2), pp. 338-35, April 2015.

“Environmental Regulatory Rigidity and Employment in the Electric Power Sector,” (co-authored with Rolf Färe, Shawna Grosskopf, and Ron Shadbegian), Chapter 5 (pp. 89-108), in Cary Coglianese, Adam Finkel & Chris Carrigan (editors.), [Does Regulation Kill Jobs?](#), University of Pennsylvania Press, Philadelphia, 2014.

[“Retrospective Cost Analysis of EPA Regulations: A Case Study Approach,”](#) (with Elizabeth Kopits, Al McGartland, Cynthia Morgan, Ron Shadbegian, Nathalie B. Simon, David Simpson, and Ann Wolverton), *Journal of Benefit-Cost Analysis*, 5(2), pp. 173-193, 2014.

[“Ex Ante and Ex post Estimates of the Cluster Rule and MACT II Rule,”](#) (with Cynthia Morgan and Ron Shadbegian), *Journal of Benefit-Cost Analysis*, 5(2), pp. 195-214, 2014.

[“Potential Gains from Trading Bad Outputs: The Case of U.S. Electric Power Plants,”](#) (with Rolf Färe and Shawna Grosskopf), *Resource and Energy Economics*, 36(1), pp. 99-112, January 2014.

“Adventures in Modeling Good and Bad Outputs: A 30 Year Retrospective,” [Proceedings of the National Marine Fisheries Service Productivity Workshop](#) (Santa Cruz, CA June 11-12, 2012), (Aaron Mamula and John Walden, editors), NOAA Technical Memorandum NMFS, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southwest Fisheries Science Center (NOAA-TM-NMFS-SWFSC-503), 2013.

[“Joint Production of Good and Bad Outputs with a Network Application,”](#) (with Rolf Färe and Shawna Grosskopf), *Encyclopedia of Energy, Natural Resource and Environmental Economic*, Vol. 2 (Resources), pp. 109-118, (Jason Shogren, editor), Elsevier Academic Press, 2013.

[“On Nonparametric Estimation: with Focus on Agriculture,”](#) (with Rolf Färe, Shawna Grosskopf, and Carlos Martin-Filho), *Annual Review of Resource Economics*, Volume 5, pp. 93-110, 2013.

[“Tradable Permits and Unrealized Gains from Trade,”](#) (with Rolf Färe and Shawna Grosskopf), *Energy Economics*, 40, pp. 416-424, November 2013.

[“Do Environmental Regulations Disproportionately Affect Small Business? Evidence from the Pollution Abatement Costs and Expenditures Survey,”](#) (with Randy Becker and Ron Shadbegian), *Journal of Environmental Economics and Management*, 66(3), pp. 523-538, November 2013.

[“Pollution Abatement and Competitiveness: A Review of Data and Analyses,”](#) *Review of Environmental Economics and Policy*, 2, No. 2, pp. 194-218. [reprinted in *Economics of the*

Environment, 6th edition (2012), (Robert Stavins, editor), published by W. W. Norton & Company of New York, Summer 2008.

[“Substitutability Among Undesirable Outputs,”](#) (with Rolf Färe, Shawna Grosskopf, William Weber), *Applied Economics*, 44(1), pp. 39-47, January 2012.

["Toxic Releases: An Environmental Performance Index for Coal-fired Electric Power Plants"](#) (with Rolf Färe and Shawna Grosskopf), *Energy Economics*, 32(1), pp. 158-165, January 2010.

[“Pollution Abatement Activities and Productivity Growth: Evidence from Germany, Japan, the Netherlands, and the United States”](#) (with Deborah Vaughn Aiken, Rolf Färe and Shawna Grosskopf), *Environmental and Resource Economics*, 44(1), pp. 11-28, September 2009.

[“Perspectives on Pollution Abatement and Competitiveness: Theory, Data, and Analyses,”](#) *Review of Environmental Economics and Policy*, 2(2), pp. 194-218, Summer 2008.

["Environmental Production Functions and Environmental Directional Distance Functions"](#) (with Rolf Färe and Shawna Grosskopf). *Energy*, 32(7), pp. 1055-1066, July 2007.

["Pollution Abatement Activities and Traditional Measures of Productivity: A Joint Production Perspective"](#) (with Rolf Färe and Shawna Grosskopf), *Ecological Economics*, 62(3-4), pp. 673-682, May 2007.

[“Decomposing Coal-fired Electric Power Plant Emissions within a Joint Production Framework,”](#) *Energy Economics*, 28(1), pp. 26-43, January 2006.

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[“Adjusting the Measurement of U.S. Manufacturing Productivity for the Generation of Air Pollutants,”](#) (with Deborah Vaughn Aiken), *Resource and Energy Economics*, 25(4), pp. 329-351, October 2003.

["Technical Change and Measuring Pollution Abatement Costs: An Activity Analysis Framework,"](#) *Environmental & Resource Economics*, 18(1), pp. 61-85, January 2001.

["Accounting for Air Pollution Emissions in Measures of State Manufacturing Productivity Growth"](#) (with Rolf Färe and Shawna Grosskopf), *Journal of Regional Science*, 41(3), pp. 381-409, August 2001.

["Environmental Protection Expenditure and Its Representation in National Accounts: A Thesis paper on political Implications and on the Need for Future Research,"](#) (with G. Gie, C. Liepert, Dieter Schäfer, Anton Steurer) in *Environmental Accounting in Theory and Practice*, (Kimio Uno and Peter Bartelmus, editors), Kluwer Academic Publishers), pp.309-319, 1997.

["Environmental Protection Activities in the United States and Their Consequences,"](#) (with Deborah Vaughn Nestor) in *Environmental Accounting in Theory and Practice*, (Kimio Uno and Peter Bartelmus, editors), Kluwer Academic Publishers, pp. 131-142, 1997.

“The US Environmental Protection Industry: A Proposed Framework for Assessment,” (with Deborah Vaughn Nestor) in *Environment Industry: the Washington Meeting*, OECD, pp. 225-247, 1996.

["CGE Model of Pollution Abatement Processes for Assessing the Economic Effects of Environmental Policy,"](#) (with Deborah Nestor) *Economic Modeling*, 12(1), pp. 53-59, January 1995.

["Alternative Specification for Environmental Control Costs in a General Equilibrium Framework,"](#) (with Deborah Nestor), *Economics Letters*, 48 (3-4), pp. 273-280, June 1995.

["Environment-Economic Accounting and Indicators of the Economic Importance of Environmental Protection Activities,"](#) (with Deborah Nestor), *The Review of Income and Wealth*, 41(3), pp. 265-288, September 1995.

["The Effect of Environmental Regulations on the Efficiency of Electric Utilities: 1969 vs. 1975"](#) (with Rolf Färe and Shawna Grosskopf), *Applied Economics*, 21(2), pp. 225-235, February 1989.

["Measuring Efficiency When Some Outputs are Undesirable: A Non-Parametric Approach,"](#) (with Rolf Färe, Shawna Grosskopf and C.A. Knox Lovell), *Review of Economics and Statistics*, 71(1) pp. 90-98, February 1989.

["Effects on relative efficiency in electric power generation due to environmental controls,"](#) (with Rolf Färe and Shawna Grosskopf) *Resources and Energy*, 8(2), pp. 167-184, June 1986.

["Environmental Control Costs and U.S. Effective Rates of Protection,"](#) *Public Finance Review*, 13(2), pp. 161-182, April 1985.

["The Short-Run Impact of Environmental Protection Costs on U.S. Producer Prices,"](#) *Journal of Environmental Economics and Management*, 11(4), pp. 380-390, December 1984.

### **Select EPA Reports:**

Cluster Rule and MACT II Rule,” (co-authored with Cynthia Morgan and Ron Shadbegian), Chapter 2 (pp. 24-65), in [Retrospective Study of the Costs of EPA Regulations: A Report of Four Case Studies](#), National Center for Environmental Economics, Office of Policy, EPA 240-F-14-001, 2014.

[Statistical Methodology for Assigning Emissions to Industries in the United States: 1970 to 1990, 2001,](#) (with Charles Jung, Anne Forrest, and James Lockhart), U.S. Environmental Protection Agency, National Center for Environmental Economics, EPA 240-R-01-002, 2001.

[Statistical Methodology for Assigning Emissions to Industries in the United States, Revised Estimates: 1970 to 1997](#), U.S. Environmental Protection Agency, National Center for Environmental Economics, EPA 240-R-01-003, 2001.

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