Elizabeth Kopits, Economist in EPA's National Center for Environmental Economics

Research Interests: Retrospective analysis, energy efficiency paradox, climate change, air quality standards for criteria air pollutants

Biography: Elizabeth Kopits has been an economist at the National Center for Environmental Economics at the U.S. EPA since 2004. She provides economic analysis and expertise to support a wide range of policy actions, such as air quality standards for ozone, regulations affecting the oil and natural gas sector, mobile sources, and landfills, and compliance with the National Environmental Policy Act. Since 2009, she has also served as the lead for the team of economists and physical scientists that performs the technical development of social cost of greenhouse gas estimates for use in U.S. federal regulatory analysis. Recently her research focuses on retrospective analysis of the costs of EPA regulations and industry energy efficiency investment decisions. Elizabeth was the senior economist for environmental and natural resource issues at the Council of Economic Advisers in 2008-2009. Elizabeth has a PhD in economics (2004) from the University of Maryland at College Park and a BS in mathematics (1998) from Georgetown University.

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Recent NCEE Working Papers:

"Consumer Valuation of Fuel Economy: Findings from Recent Panel Studies" (with Heather Klemick and Ann Wolverton). NCEE Working Paper #2019-02.

Peer-Reviewed Publications:

"How Do Data Centers Make Energy Efficiency Investment Decisions: Qualitative Evidence from Focus Groups and Interviews" (with Heather Klemick and Ann Wolverton). *Energy Efficiency*, 12(5), pp. 1359-1377, 2019.

(Extended Working Paper version: NCEE Working Paper, 2017-06.)

"Potential Barriers to Improving Energy Efficiency in Commercial Buildings: The Case of Supermarket Refrigeration" (with Heather Klemick and Ann Wolverton). *Journal of Benefit-Cost Analysis*, 8(1), pp. 115-145, 2017.

(Extended Working Paper version: NCEE Working Paper, 2015-03.)

"Heavy-Duty Trucking and the Energy Efficiency Paradox: Evidence from Focus Groups and Interviews," (with Ann Wolverton, Heather Klemick, and Keith Sargent). *Transportation Research Part A*, 77, pp. 154-166. July 2015.

(Extended Working Paper version: NCEE Working Paper, 2014-02.)

"Corrigendum to: Incremental CH4 and N2O Mitigation Benefits Consistent with the US Government's SC-CO2 Estimates," (with Alex Marten, Stephen Newbold, Charles Griffiths and Ann Wolverton). Climate Policy, 15(5), pp. 678-679, 2015.

- "Incremental CH4 and N2O Mitigation Benefits Consistent with the US Government's SC-CO2 Estimates" (with Alex Marten, Stephen Newbold, Charles Griffiths and Ann Wolverton). Climate Policy, 15(2), pp. 272-298, May 2015.
- "A Retrospective Assessment of the Costs of EPA's 1998 Locomotive Emission Standards." *Journal of Benefit-Cost Analysis*, 5(2), pp.285-314, November 2014.
- "Retrospective Cost Analyses of EPA Regulations: A Case Study Approach" (with Al McGartland, Cynthia Morgan, Carl Pasurka, Ron Shadbegian, Nathalie Simon, David Simpson, and Ann Wolverton). *Journal of Benefit-Cost Analysis*, 5(2), pp. 173-194, June 2014.
- "Incorporating "Catastrophic" Climate Change into Policy Analysis" (with Alex Marten and Ann Wolverton). Climate Policy, 14(5), pp. 637-664, 2014.

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- "Further comment on "A Rapid Assessment Model for Understanding the Social Cost of Carbon", (with Charles Griffiths, Chris Moore, Ann Wolverton and Stephen Newbold). Climate Change Economics, (2), 2014.
- "Developing a Social Cost of Carbon for U.S. Regulatory Analysis: A Methodology and Interpretation," (with Michael Greenstone and Ann Wolverton). Review of Environmental Economics and Policy, 7(1), pp. 23-46, Winter 2013.
- "Improving the assessment and valuation of climate change impacts for policy and regulatory analysis" (with Alex L. Marten & Robert E. Kopp, Kate C. Shouse, Charles W. Griffiths, Elke L. Hodson, Bryan K. Mignone, Chris Moore, Steve C. Newbold, Stephanie Waldhoff and Ann Wolverton). *Climatic Change* 117(3), pp. 433-438, April 2013.
- "A Rapid Assessment Model for Understanding the Social Cost of Carbon," (with S. Newbold, C. Griffiths, C. Moore, A. Wolverton). *Climate Change Economics*, 4(1), 40pp., February 2013.
- "The Social Cost of Carbon: Valuing Carbon Reductions in Policy Analysis" (with Charles Griffiths, Alex Marten, Chris Moore, Steve Newbold, and Ann Wolverton). In I Parry & R de Mooij (editors), *Fiscal Policy to Mitigate Climate Change A Guide for Policymakers*, International Monetary Fund, Washington, D.C., 2012.
- "<u>U.S. Emergency Response and Removal: Superfund's Overlooked Cleanup Program</u>," (with Robin Jenkins and Alex Marten). *Review of Environmental Economics and Policy*, 6(2), pp. 278-297, Summer 2012.
- "Lot Size, Zoning, and Suburban Housing Density" (with Virginia McConnell and Daniel Miles). *Housing Policy Debate*, 22(2), pp. 153-174, 2012.
- "The Evolution of Solid and Hazardous Waste Regulation in the United States," (with Robin Jenkins and David Simpson). Review of Environmental Economics and Policy, 3(1), pp.104-120, 2009.

- "Big Yards or Green Space?" (with Virginia McConnell and Margaret Walls). Regulation, 31(3), Fall 2008.
- "Making Markets for Development Rights Work: What Determines Demand?" (with Virginia McConnell and Margaret Walls). *Land Economics*, 84(1), pp. 1-16, February 2008.
- "Why Have Traffic Fatalities Declined in Industrialized Countries? Implications for Pedestrians and Vehicle Occupants," (with Maureen Cropper). *Journal of Transport Economics and Policy*, 42(1), pp. 129-154, January 2008.
- "The Tradeoff Between Private Lots and Public Open Space in Subdivisions at the Urban-Rural Fringe," (with Virginia McConnell and Margaret Walls). *American Journal of Agricultural Economics*, 89(5), pp. 1191-7, 2007.
- "Zoning, TDRs and the Density of Development," (with Virginia McConnell and Margaret Walls). *Journal of Urban Economics*, 59(3), pp. 440-457, May 2006.
- "<u>Using Markets for Land Preservation: Results of a TDR Program</u>," (with Virginia McConnell and Margaret Walls). *Journal of Environmental Planning and Management*, 49(5), pp. 631-51, 2006.
- "A Market Approach to Land Preservation," (with Virginia McConnell and Margaret Walls). In The <u>RFF Reader in Environmental and Resource Policy</u>, 2nd Edition, edited by Wallace Oates, p. 151, 2006. (Originally published in Resources, No. 150, Spring, 2003.)
- "<u>Farmland Preservation and Density: Can Development Rights Markets Affect Land Use Change?"</u> (with Virginia McConnell and Margaret Walls). *Agricultural and Resource Economics Review*, 34(2), pp. 131-144, October 2005.
- "Traffic Fatalities and Economic Growth," (with Maureen Cropper). Accident Analysis and Prevention, 37(1), pp. 169-78, January 2005.

Select EPA Publications:

"EPA's 1998 Locomotive Emission Standards," Chapter 4 (pp. 180-226), in <u>Retrospective Study of the Costs of EPA Regulations: A Report of Four Case Studies</u>, National Center for Environmental Economics, Office of Policy, EPA 240-F-14-001, 2014.

<u>Handbook on Benefits, Costs, and Impacts of Land Cleanup and Reuse</u>, (contributing authors include Heather Klemick, Robin Jenkins, Alex Marten, David Simpson and others), EPA 240-R-11-001, October 2011.

Honors and Awards:

2017 EPA Science and Technology Achievement Awards, for "Analyzing retrospective cost of EPA regulations" (with Al McGartland, Cynthia Morgan, Carl Pasurka, Ron Shadbegian, Nathalie Simon, David Simpson, and Ann Wolverton). Level III Award.

- 2017 EPA Science and Technology Achievement Awards, for "Filling an analytic gap in benefit-cost analysis of methane and nitrous oxide emission reductions" (with Alex Marten, Charles Griffiths, Steve Newbold, and Ann Wolverton). Level III Award.
- 2016 EPA Science and Technology Achievement Awards, for "Developing a Social Cost of Carbon for US Regulatory Analysis: A Methodology and Interpretation" (with Michael Greenstone and Ann Wolverton). Level III Award.
- 2016 EPA Science and Technology Achievement Awards, for "Incorporating "Catastrophic" Climate Change into Policy Analysis" (with Alex Marten and Ann Wolverton). Honorable Mention.
- 2016 EPA Science and Technology Achievement Awards, for "A Rapid Assessment Model for Understanding the Social Cost of Carbon" (and associated "Further Comment") (with Ann Wolverton, Steve Newbold, Chris Moore, and Charles Griffiths). Honorable Mention.