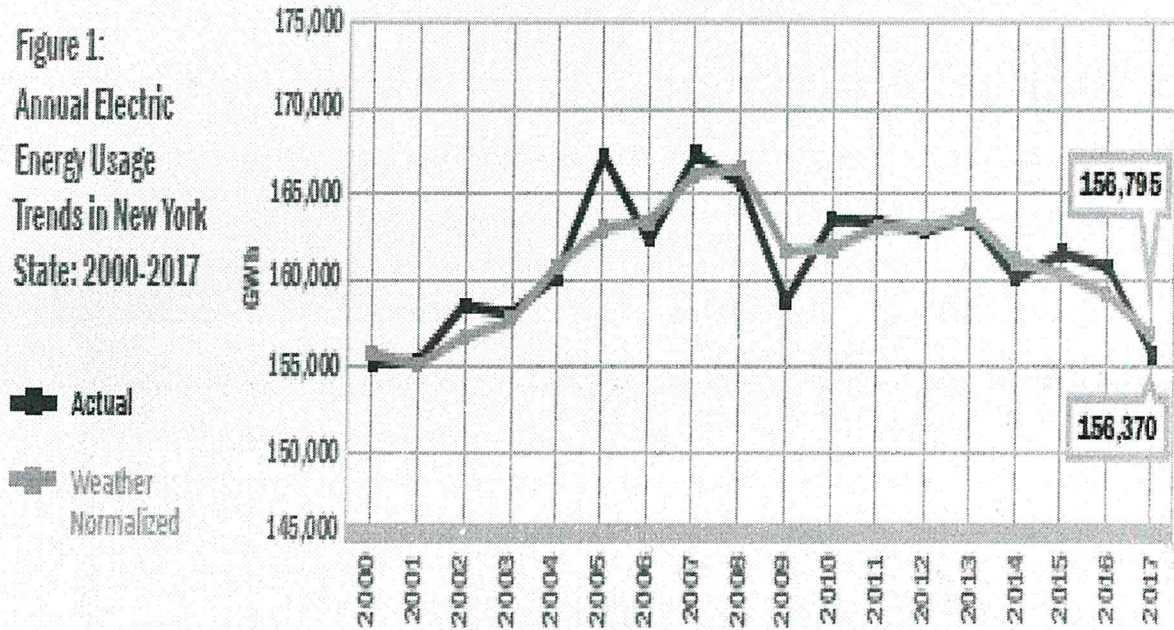


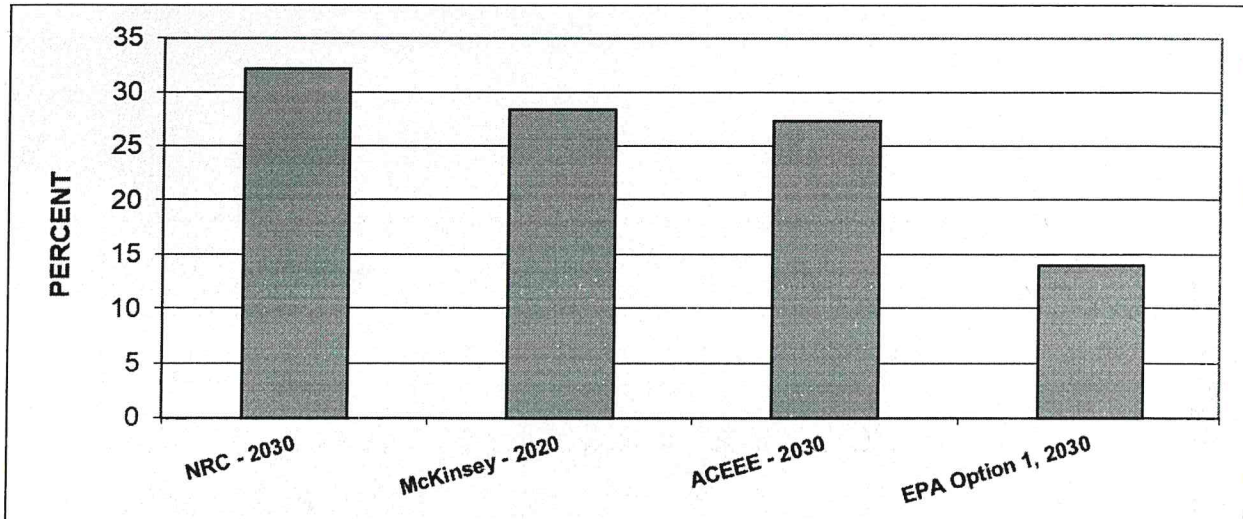
**MNC-13:
NYISO ENERGY USAGE TREND SUPPORTS AGREE/NIRS ON DEMAND**

Figure 1:
Annual Electric
Energy Usage
Trends in New York
State: 2000-2017



Source: NYISO 2018 Trends, p. 12.

**MNC-14:
EFFICIENCY POTENTIAL FROM MAJOR NATIONAL STUDIES COMPARED TO EPA
OPTION 1**



Sources and Notes: “Comments of Dr. Mark Cooper.” In the Matter of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, Environmental Protection Agency, RIN 2060-AR33, November 24, 2015, Table II-2; Gold, Rachel, Laura, et. al., *Energy Efficiency in the American Clean Energy and Security Act of 2009: Impact of Current Provisions and Opportunities to Enhance the Legislation*, American Council for an Energy Efficient Economy, September 2009), McKinsey Global Energy and Material, *Unlocking Energy Efficiency in the U.S. Economy* (McKinsey & Company, 2009); National Research Council of the National Academies, *America’s Energy Future: Technology and Transformation, Summary Edition* (Washington, D.C.: 2009). The NRC relies on a study by Lawrence Berkeley Laboratory for its assessment (Richard Brown, Sam Borgeson, Jon Koomey and Peter Biermayer, *U.S. Building-Sector Energy Efficiency Potential* (Lawrence Berkeley National Laboratory, September 2008). and EPA, *Regulatory Impact Analysis*, 2014, Table 3-11.

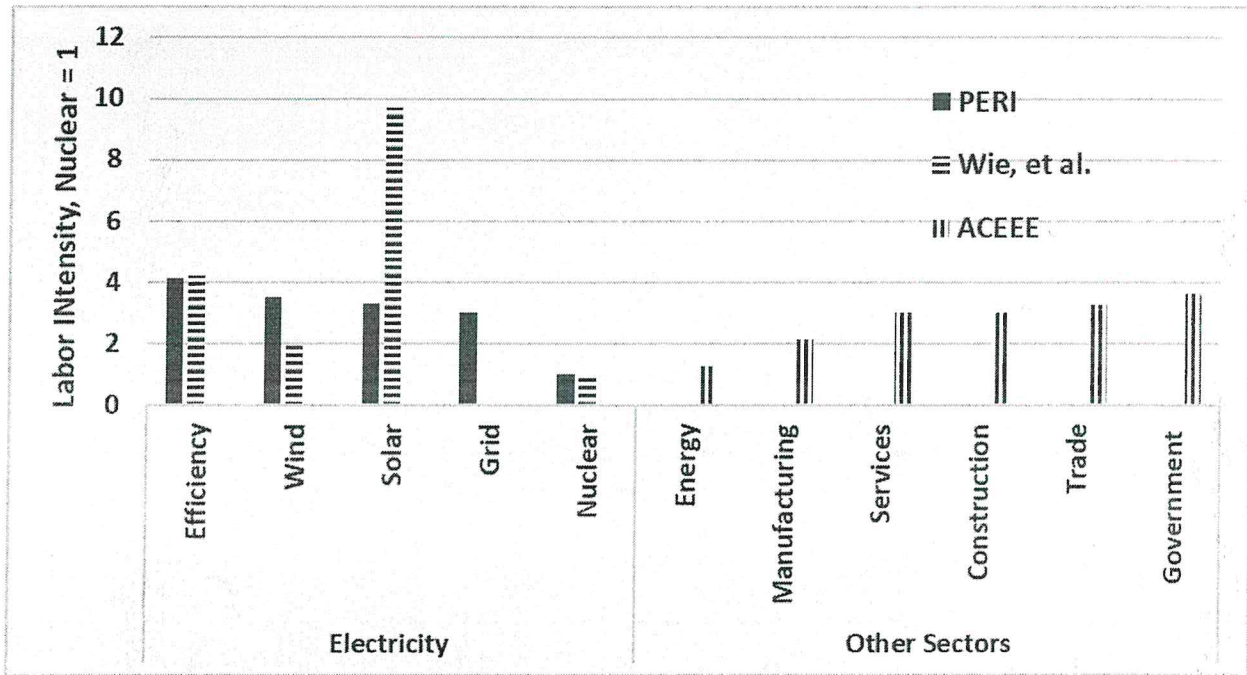
**MNC-15:
MEETING NEW YORK GOALS WITHOUT SUBSIDIZING NUCLEAR**

	2030	2040
Efficiency		
Base case = 1.4%/year	35	51
Accelerated = 2%/year	51	78
Load @ Accelerated	135	124
Transformation Dividend = 17%	10	10
Reduction in Coincident Peak (34%) > Reduction in load (17%)		
Effective New Load	125	114
Resources		
Achievable 2030, Economic 2040		
New Non-Hydro	26	88
Unsubidized Nuclear	22	22
Existing Hydro	18	18
% Low Carbon		
w/o Transformation Dividend	49%	103%
with Transformation Dividend	53%	112%

Sources: Staff White Paper, NYSERDA Energy Efficiency and Renewable Energy Potential Study of New York State, Synapse

MNC-16

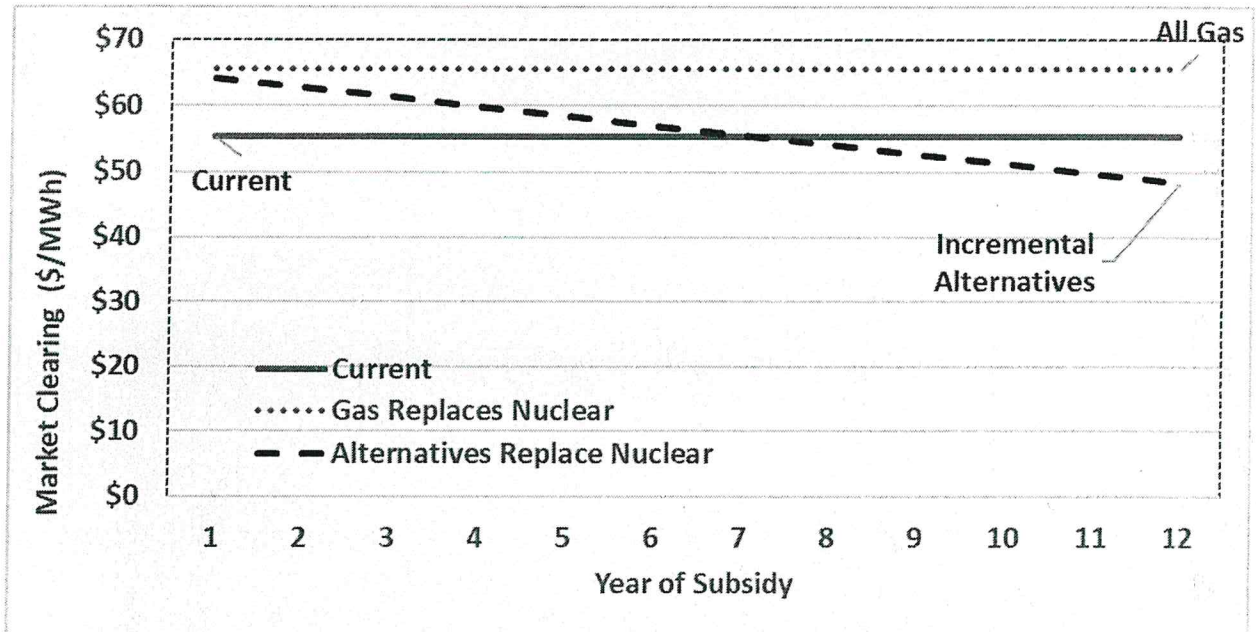
MACROECONOMIC MULTIPLIERS FOR ALTERNATIVE ELECTRICITY RESOURCES AND ECONOMIC SECTORS



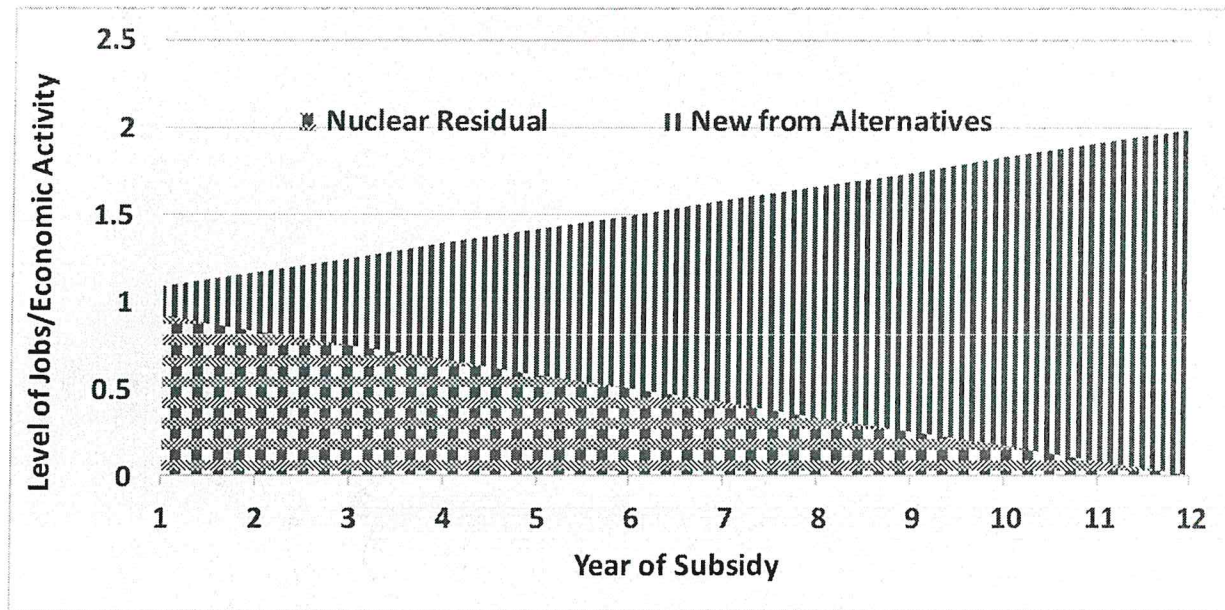
Wie, Max Shana Patadia and Daniel Kammen, 2010, "Putting Renewables and Energy Efficiency to work: How Many Jobs Can the Clean energy Industry Generate in the US?", *Energy Policy*, 38. Rachel Gold, et al., *Appliance and Equipment Efficiency Standards: A Money Maker and Job Creator*, American Council for an Energy Efficient Economy, January 2011, p. 9, based on the IMPLAN Model, 2009., *How Infrastructure Investments Support the U.S. Economy: Employment, Productivity and Growth*, James Heintz, Robert Pollin, Heidi Garrett-Peltier, Political Economy Research Institute, January 2009.

MNC-17
MODELING IN MACROECONOMIC IMPACT OF RETIRING UPSTATE REACTORS

Alternative Scenarios for the Market Clearing Price with Retirement

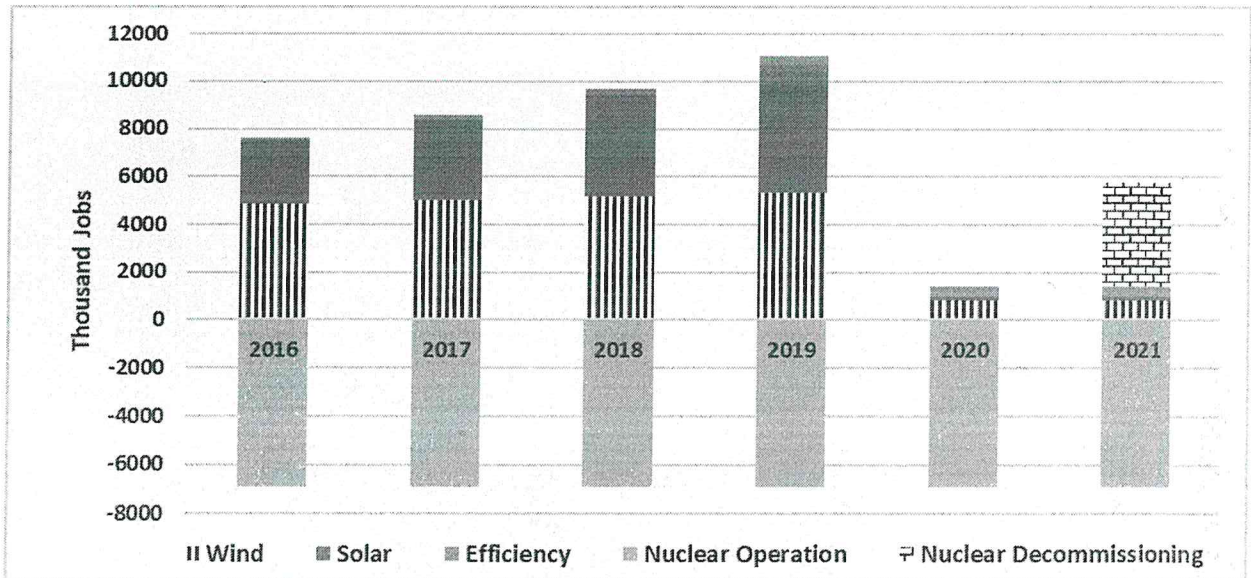


Jobs/Macroeconomic Impact Assuming Multiplier for Alternatives/Gas is Twice Nuclear



Mark Berkman and Dean Murphy, *New York's Upstate Nuclear Power Plants' Contribution to the State Economy* prepared for New York State IBEW Utility Labor Council, Rochester Building and Construction Trades Council, Central and Northern New York Building and Construction Trades Council, Brattle Group, December 2015

**MNC-18:
JOBS IMPACT OF EARLY RETIREMENT AND REPLACEMENT, INCLUDING DECOMMISSIONING**



Sources: Illinois Commerce Commission, Illinois Power Agency, Illinois Environmental Protection Agency, Illinois Department Of Commerce And Economic Opportunity, *Potential Nuclear Power Plant Closings In Illinois: Impacts And Market-Based Solutions, Response To The Illinois General Assembly Concerning House Resolution 1146*, January 5, 2015, p. 139. Decommissioning is discussed on p. 134.

Mark Cooper

DR. MARK COOPER

Sworn to before me this
11 day of December, 2018

Minaxi Patel

Notary Public

MINAXI PATEL
 NOTARY PUBLIC STATE OF MARYLAND
 MONTGOMERY COUNTY
 MY COMMISSION EXPIRES FEBRUARY 13, 2020

MARK N. COOPER
504 HIGHGATE TERRACE
SILVER SPRING, MD 20904
(301) 384-2204
markcooper@aol.com

EDUCATION:

Yale University, Ph.D., 1979, Sociology
University of Maryland, M.A., 1973, Sociology
City College of New York, B.A., 1968, English

PROFESSIONAL EXPERIENCE:

President, Citizens Research, 1983 - present
Research Director, Consumer Federation of America, 1983-present
Associated Fellow, Columbia Institute on Tele-Information, 2003-present
Fellow, Donald McGannon Communications Research Center, Fordham University, 2005-present
Senior Fellow for Economic Analysis, Institute for Energy and the Environment, Vermont Law School, 2009-present
Fellow, Silicon Flatirons, University of Colorado, 2009-present
Fellow, Stanford Center on Internet and Society, 2000-2010
Principle Investigator, Consumer Energy Council of America, Electricity Forum, 1985-1994
Director of Energy, Consumer Federation of America, 1984-1986
Director of Research, Consumer Energy Council of America, 1980-1983
Consultant, Office of Policy Planning and Evaluation, Food and Nutrition Service, United States Department of Agriculture, 1981-1984
Consultant, Advanced Technology, Inc., 1981
Technical Manager, Economic Analysis and Social Experimentation Division, Applied Management Sciences, 1979
Research Associate, American Research Center in Egypt, 1976-1977
Research Fellow, American University in Cairo, 1976
Staff Associate, Checchi and Company, Washington, D.C., 1974-1976
Consultant, Division of Architectural Research, National Bureau of Standards, 1974
Consultant, Voice of America, 1974
Research Assistant, University of Maryland, 1972-1974

TEACHING EXPERIENCE:

Lecturer, Washington College of Law, American University, Spring, 1984 - 1986, Seminar in Public Utility Regulation
Guest Lecturer, University of Maryland, 1981-82, Energy and the Consumer, American University, 1982, Energy Policy Analysis
Assistant Professor, Northeastern University, Department of Sociology, 1978-1979, Sociology of Business and Industry, Political Economy of Underdevelopment, Introductory Sociology, Contemporary Sociological Theory; College of Business Administration, 1979, Business and Society
Assistant Instructor, Yale University, Department of Sociology, 1977, Class, Status and Power
Teaching Assistant, Yale University, Department of Sociology, 1975-1976, Methods of Sociological Research, The Individual and Society
Instructor, University of Maryland, Department of Sociology, 1974, Social Change and Modernization, Ethnic Minorities

Instructor, U.S. Army Interrogator/Linguist Training School, Fort Hood, Texas, 1970-1971

PROFESSIONAL ACTIVITIES:

Member, Advisory Committee on Appliance Efficiency Standards, U.S. Department of Energy, 1996 - 1998
Member, Energy Conservation Advisory Panel, Office of Technology Assessment, 1990-1991
Fellow, Council on Economic Regulation, 1989-1990
Member, Increased Competition in the Electric Power Industry Advisory Panel, Office of Technology Assessment, 1989
Participant, National Regulatory Conference, The Duty to Serve in a Changing Regulatory Environment, William and Mary, May 26, 1988
Member, Subcommittee on Finance, Tennessee Valley Authority Advisory Panel of the Southern States Energy Board, 1986-1987
Member, Electric Utility Generation Technology Advisory Panel, Office of Technology Assessment, 1984 - 1985
Member, Natural Gas Availability Advisor Panel, Office of Technology Assessment, 1983-1984
Participant, Workshop on Energy and the Consumer, University of Virginia, November 1983
Participant, Workshop on Unconventional Natural Gas, Office of Technology Assessment, July 1983
Participant, Seminar on Alaskan Oil Exports, Congressional Research Service, June 1983
Member, Thermal Insulation Subcommittee, National Institute of Building Sciences, 1981-1982
Round Table Discussion Leader, The Energy Situation: An Open Field For Sociological Analysis, 51st Annual Meeting of the Eastern Sociological Society, New York, March, 1981
Member, Building Energy Performance Standards Project Committee, Implementation Regulations Subcommittee, National Institute of Building Sciences, 1980-1981
Participant, Summer Study on Energy Efficient Buildings, American Council for an Energy Efficient Economy, August 1980
Member, University Committee on International Student Policy, Northeastern University, 1978-1979
Chairman, Session on Dissent and Societal Reaction, 45th Annual Meeting of the Eastern Sociological Society, April, 1975
Member, Papers Committee, 45th Annual Meeting of the Eastern Sociological Society, 1975
Student Representative, Programs, Curricula and Courses Committee, Division of Behavioral and Social Sciences, University of Maryland, 1973-1974
President, Graduate Student Organization, Department of Sociology, University of Maryland, 1973-1974

HONORS AND AWARDS:

Ester Peterson Award for Consumer Service, 2010
American Sociological Association, Travel Grant, Uppsala, Sweden, 1978
Fulbright-Hayes Doctoral Research Abroad Fellowship, Egypt, 1976-1977
Council on West European Studies Fellowship, University of Grenoble, France, 1975
Yale University Fellowship, 1974-1978
Alpha Kappa Delta, Sociological Honorary Society, 1973
Phi Delta Kappa, International Honorary Society, 1973
Graduate Student Paper Award, District of Columbia Sociological Society, 1973
Science Fiction Short Story Award, University of Maryland, 1973
Maxwell D. Taylor Award for Academic Excellence, Arabic, United States Defense Language Institute, 1971
Theodore Goodman Memorial Award for Creative Writing, City College of New York, 1968
New York State Regents Scholarship, 1963-1968
National Merit Scholarship, Honorable Mention, 1963

PUBLICATIONS:

ENERGY

Books and Chapters

The Political Economy of Electricity: Progressive Capitalism and the Struggle to Build a Sustainable Power Sector (Praeger, 2017)

"Recognizing the Limits of Markets, Rediscovering Public Interest in Utilities," in Robert E. Willett (ed), *Electric and Natural Gas Business: Understanding It! (2003 and Beyond)* (Houston: Financial Communications: 2003)

"Protecting the Public Interest in the Transition to Competition in Network Industries," The Electric Utility Industry in Transition (Public Utilities Reports, Inc. & the New York State Energy Research and Development Authority, 1994)

"The Seven Percent Solution: Energy Prices, Energy Policy and the Economic Collapse of the 1970s," in *Energy Concerns and American Families in the 1980s* (Washington, D.C.: The American Association of University Women Educational Foundation, 1983)

"Natural Gas Policy Analysis," in Edward Mitchell (Ed.), Natural Gas Pricing Policy (Washington, D.C.: American Enterprise Institute, 1983)

Equity and Energy: Rising Energy Prices and the Living Standard of Lower Income Americans (Boulder, Colorado: Westview Press, 1983)

Articles and Papers:

"Governing the Global Climate Commons: The Political Economy of State and Local Action, After the U.S. Flip-Flop on the Paris Agreement," *Energy Policy*, 2018.

"Renewable and distributed resources in a post-Paris low carbon future: The key role and political economy of sustainable electricity," *Energy Research & Social Science*, 19 (2016) 66-93.

"The Unavoidable Economics of Nuclear Power." *Corporate Knights*, January 22, 2014.

Energy Efficiency Performance Standards: Driving Consumer and Energy Savings in California. Presentation at the California Energy Commission's Energy Academy, February 20, 2014.

"Small modular reactors and the future of nuclear power in the United States," *Energy Research & Social Science*, 2014.

"The EPA carbon plan: Coal loses, but nuclear doesn't win," *Bulletin of the Atomic Scientists*, 70, 2014

"Multi-Criteria Portfolio Analysis of Electricity Resources: An Empirical Framework For Valuing Resource In An Increasingly Complex Decision Making Environment", *Expert Workshop: System Approach to Assessing the Value of Wind Energy to Society*, European Commission Joint Research Centre, Institute for Energy and Transport, Petten, The Netherlands, November 13-14, 2013

"Nuclear aging: Not so gracefully," *Bulletin of the Atomic Scientists*, 69, 2013

"Nuclear Safety and Affordable Reactors: Can We Have Both?," *Bulletin of the Atomic Scientists*, 68, 2012

"Nuclear Safety and Nuclear Economics, Fukushima Reignites the Never-ending Debate: Is Nuclear Power not worth the risk at any price?," *Symposium on the Future of Nuclear Power*, University of Pittsburgh, March 27-28, 2012

"Nuclear liability: the post-Fukushima case for ending Price-Anderson," *Bulletin of the Atomic Scientists*, October, 67, 2011.

"Prudent Resource Acquisition in a Complex Decision Making Environment: Multidimensional Analysis Highlights the Superiority of Efficiency," *Current Approaches to Integrated Resource Planning, 2011 ACEEE National Conference on Energy Efficiency as a Resource*, Denver, September 26, 2011

"The Implications of Fukushima: The US perspective," *Bulletin of the Atomic Scientists*, July/August 2011 67: 8-13
Least Cost Planning for 21st Century Electricity Supply: Meeting the Challenges of Complexity and Ambiguity in Decision Making, MACRUC Annual Conference, June 5, 2011

"Risk, Uncertainty and Ignorance: Analytic Tools for Least-Cost Strategies to Meet Electricity Needs in a Complex Age," *Variable Renewable Energy and Natural Gas: Two Great Things that Go Together, or Best Not to*

Mix Them. NARUC Winter Committee Meetings, Energy Resources, Environment and Gas Committee, February 15, 2011

"The Failure of Federal Authorities to Protect American Energy Consumers From Market Power and Other Abusive Practices," *Loyola Consumer Law Review*, 19:4 (2007)

"Too Much Deregulation or Not Enough," *Natural Gas and Electricity*, June 2005

"Real Energy Crisis is \$200 Billion Natural Gas Price Increase," *Natural Gas and Electricity*, August 2004

"Regulators Should Regain Control to Prevent Abuses During Scarcity," *Natural Gas*, August 2003

"Economics of Power: Heading for the Exits, Deregulated Electricity Markets Not Working Well," *Natural Gas*, 19:5, December 2002

"Let's Go Back," *Public Power*, November-December 2002

"Conceptualizing and Measuring the Burden of High Energy Prices," in Hans Landsberg (Ed.), *High Energy Costs: Assessing the Burden* (Washington, D.C.: Resources For the Future, 1982)

"Energy Efficiency Investments in Single Family Residences: A Conceptualization of Market Inhibitors," in Jeffrey Harris and Jack Hollander (Eds.), *Improving Energy Efficiency in Buildings: Progress and Problems* (American Council for An Energy Efficient Economy, 1982)

"Policy Packaging for Energy Conservation: Creating and Assessing Policy Packages," in Jeffrey Harris and Jack Hollander (Eds.), *Improving Energy Efficiency in Buildings: Progress and Problems* (American Council for An Energy Efficient Economy, 1982)

"The Role of Consumer Assurance in the Adoption of Solar Technologies," *International Conference on Consumer Behavior and Energy Policy*, August, 1982

"Energy and the Poor," *Third International Forum on the Human Side of Energy*, August, 1982

"Energy Price Policy and the Elderly," *Annual Conference, National Council on the Aging*, April, 1982

"Energy and Jobs: The Conservation Path to Fuller Employment," *Conference on Energy and Jobs conducted by the Industrial Union Department of the AFL-CIO*, May 1980

Research Reports

A Clean Slate for Vogtle, Clean Energy for Georgia: The Case for Ending Construction at the Vogtle Nuclear Power Plant and Reorienting Policy to Least-Cost, Clean Alternatives, for the Sierra Club of Georgia, February 2018

The Failure of The Nuclear Gamble In South Carolina: Regulators can Save Consumers Billions by Pulling the Plug on Summer 2 & 3 Already Years behind Schedule and Billions Over Budget Things are Likely to Get Much Worse if the Project Continues, for the Sierra Club of South Carolina, July 2017

Power Shift, The Nuclear War Against the Future: How Nuclear Advocates Are Thwarting the Deployment of a 21st Century Electricity Sector, Institute for Energy and the Environment, Vermont Law School, May, 2015.

Advanced Cost Recovery, Institute for Energy and the Environment, Vermont Law School, September 2013

Renaissance In Reverse: Competition Pushes Aging U.S. Nuclear Reactors To The Brink Of Economic Abandonment, Institute For Energy And The Environment, Vermont Law School, July 2013.

Energy Efficiency Performance Standards: The Cornerstone of Consumer-Friendly Energy Policy, October 2013

The Zero Emissions Vehicle Program: Clean Cars States Lead in Innovation, October 24, 2013

Renaissance in Reverse: Competition Pushes Aging U.S. Nuclear Reactors to the Brink of Economic Abandonment, July 2013.

The Economic Feasibility, Impact On Public Welfare And Financial Prospects For New Nuclear Construction, For Utah Heal, July 2013

Public Risk, Private Profit, Ratepayer Cost, Utility Imprudence: Advanced Cost Recovery for Reactor Construction Creates another Nuclear Fiasco, Not a Renaissance, March 2013

Fundamental Flaws In SCE&G's Comparative Economic Analysis, October 1, 2012

Capturing The Value Of Offshore Wind, Mainstream Renewable Power, October 2012.

Policy Challenges of Nuclear Reactor Construction: Cost Escalation and Crowding Out Alternatives, Institute for Energy and the Environment, Vermont Law School, September, 2010

U.S. Oil Market Fundamentals and Public Opinion, Consumer Federation of America, May 2010

Building on the Success of Energy Efficiency Programs to Ensure an Affordable Energy Future, Consumer Federation of America, February 2010

The Impact of Maximizing Energy Efficiency on Residential Electricity and Natural Gas Utility Bills in a Carbon-Constrained Environment: Estimates of National and State-By-State Consumer Savings, Consumer Federation of America November 2009

Shifting Fuel Economy Standards into High Gear, Consumer Federation of America, November 24, 2009

A Consumer Analysis of Energy Efficiency and Renewable Energy Standards: The Cornerstone of Consumer-Friendly Energy/Environmental Policy, Consumer Federation of America, May 2009

All Risk; No Reward, Institute for Energy and the Environment, Vermont Law School, Dec 2009.

The Economics of Nuclear Reactors: Renaissance of Relapse, Institute for Energy and the Environment, Vermont Law School, June 2009.

A Consumer Analysis of the Adoption of the California Clean Cars Program in Other States: Florida, Consumer Federation of America, November 2008

A Boom for Big Oil – A Bust for Consumers: An analysis of Policies to Meet American Energy Needs, Consumer Federation of America, September 2008

Climate Change and the Electricity Consumer: Background Analysis to Support a Policy Dialogue, Consumer Federation of America, June 2008

Ending America’s Oil Addiction: A Quarterly Report on Consumption, Prices and Imports, Consumer Federation of America, April 2008

A Consumer Analysis of the Adoption of the California Clean Cars Program in Other States: Arizona, Consumer Federation of America, March 2008

A Step Toward A Brighter Energy Future, Consumer Federation of America, December 2007

A Consumer Analysis of the Adoption of the California Clean Cars Program in Other States: New Mexico, Consumer Federation of America, November 2007

Not Time to Waste: America’s Energy Situation Is Dangerous, But Congress Can Adopt New Policies to Secure Our Future, Consumer Federation of America, October 2007

Technology, Cost and Timing, Consumer Federation of America, July 2007

Florida’s Stake in the Fuel Economy Battle, July 2007

Big Oil v. Ethanol, Consumer Federation of America, July 2007

Too Little, Too Late: Why the Auto Industry Proposal To Go Low and Slow on Fuel Economy Improvements Is Not in the Consumer or National Interest, Consumer Federation of America, July 2007

The Senate Commerce Committee Bill Is Much Better For Consumers and The Nation Than the Automobile Industry Proposal, Consumer Federation of America, June 2007

Rural Households Benefit More From Increases In Fuel Economy, Consumer Federation of America, June 2007

A Consumer Pocketbook And National Cost-Benefit Analysis of “10 in10”, Consumer Federation of America, June 2007

Time to Change the Record on Oil Policy, Consumer Federation of America, August 2006

50 by 2030: Why \$3.00 Gasoline Makes the 50-Miles Per Gallon Car Feasible, Affordable and Economic, Consumer Federation of America, (May 2006)

The Role of Supply, Demand, Industry Behavior and Financial Markets in the Gasoline Price Spiral (Prepared for Wisconsin Attorney General Peggy A. Lautenslager, May 2006)

Debunking Oil Industry Myths and Deception: The \$100 Billion Consumer Rip-Off (Consumer Federation of America and Consumers Union, May 3, 2006)

The Role of Supply, Demand and Financial Markets in the Natural Gas Price Spiral (prepared for the Midwest Attorneys General Natural Gas Working Group: Illinois, Iowa, Missouri, Wisconsin, March 2006)

The Impact of Rising Prices on Household Gasoline Expenditures (Consumer Federation of America, September 2005)

Responding to Turmoil in Natural Gas Markets: The Consumer Case for Aggressive Policies to Balance Supply and Demand (consumer Federation of America, December 2004)

Record Prices, Record Oil Company Profits: The Failure Of Antitrust Enforcement To Protect American Energy Consumers (Consumer Federation of America, Consumers Union, September 2004)

Fueling Profits: Industry Consolidation, Excess Profits, & Federal Neglect: Domestic Causes of Recent Gasoline and Natural Gas Price Shocks (Consumer Federation of America and Consumers Union, May 2004)

Spring Break in the U.S. Oil Industry: Price Spikes, Excess Profits and Excuses (Consumer Federation of America, October 2003)

How Electricity Deregulation Puts Pressure On The Transmission Network And Increases It's Cost (Consumer Federation of America, Consumers Union and U.S. PIRG, August 2003)

A Discouraging Word (or Two, or Three, or Four) About Electricity Restructuring in Texas, Pennsylvania, New England and Elsewhere Consumer Federation of America, U.S. Public Interest Research Group and Consumers Union, March 2003)

All Pain, No Gain: Restructuring and Deregulation in the Interstate Electricity Market (Consumer Federation of America, September 2002)

U.S. Capitalism and the Public Interest: Restoring the Balance in Electricity and Telecommunications Markets (Consumer Federation of America, August 2002)

Electricity Deregulation and Consumers: Lesson from a Hot Spring and a Cool Summer (Consumer Federation of America, August 30, 2001)

Ending the Gasoline Price Spiral: Market Fundamentals for Consumer-Friendly Policies to Stop the Wild Ride (Consumer Federation of America, July 2001)

Analysis of Economic Justifications and Implications of Taxing Windfall Profits in the California Wholesale Electricity Market (Consumer Federation of America and Consumers Union, June 13, 2001)

Behind The Headlines Of Electricity Restructuring A Story Of Greed, Irresponsibility And Mismanagement Of A Vital Service In A Vulnerable Market (Consumer Federation of America, March 20, 2001)

Reconsidering Electricity Restructuring: Do Market Problems Indicate a Short Circuit or a Total Blackout? (Consumer Federation of America, November 30, 2000)

Mergers and Open Access to Transmission in the Restructuring Electric Industry (Consumer Federation of America, April 2000)

Electricity Restructuring and the Price Spikes of 1998 (Consumer Federation of America and Consumers Union, June 1999)

The Residential Ratepayer Economics of Electric Utility Restructuring (Consumer Federation of America, July 1998)

Consumer Issues in Electric Utility Restructuring (Consumer Federation of America, February 12, 1998)

A Consumer Issue Paper on Electric Utility Restructuring (American Association of Retired Persons and the Consumer Federation of America, January, 1997)

Transportation, Energy, and the Environment: Balancing Goals and Identifying Policies, August 1995

A Residential Consumer View of Bypass of Natural Gas Local Distribution Companies, February 1988

The National Energy Security Policy Debate After the Collapse of Cartel Pricing: A Consumer Perspective, January 1987

The Energy, Economic and Tax Effects of Oil Import Fees, October 25, 1985

The Bigger the Better: The Public Interest in Building a Larger Strategic Petroleum Reserve, June 12, 1984

The Consumer Economics of CWIP: A Short Circuit for American Pocketbooks, April, 1984

Public Preference in Hydro Power Relicensing: The Consumer Interest in Competition, April 1984

Concept Paper for a Non-profit, Community-based, Energy Services Company, November 1983

The Consumer and Energy Impacts of Oil Exports, April 1983

Up Against the Consumption Wall: The Impact of Rising Energy Prices on Lower Income Consumers, March 1983

A Decade of Despair: Rising Energy Prices and the Living Standards of Lower Income Americans, September 1982

The Impact of Rising Energy Prices on the Delivery of Public Service by Local Governments, August 1982

The Impact of Rising Energy Prices on the Low Income Population of the Nation, the South, and the Gulf Coast Region, July, 1982

A Comprehensive Analysis of the Impact of a Crude Oil Import Fee: Dismantling a Trojan Horse, April 1982

The Past as Prologue II: The Macroeconomic Impacts of Rising Energy prices, A Comparison of Crude Oil Decontrol and Natural Gas Deregulation, March, 1982

The Past as Prologue I: The Underestimation of Price Increases in the Decontrol Debate, A Comparison of Oil and Natural Gas, February 1982

Oil Price Decontrol and the Poor: A Social Policy Failure, February 1982

Natural Gas Decontrol: A Case of Trickle-Up Economics, January 1982

A Comprehensive Analysis of the Costs and Benefits of Low Income Weatherization and Its Potential Relationship to Low Income Energy Assistance, June 1981

Summary of Market Inhibitors, February 1981

Program Models and Program Management Procedures for the Department of Energy's Solar Consumer Assurance Network Project: A Rapid Feedback Evaluation, February 1981

An Analysis of the Economics of Fuel Switching Versus Conservation for the Residential Heating Oil Consumer, October 1980

Energy Conservation in New Buildings: A Critique and Alternative Approach to the Department of Energy's Building Energy Performance Standards, April, 1980

The Basics of BEPS: A Descriptive Summary of the Major Elements of the Department of Energy's Building Energy Performance Standards, February, 1980

COMMUNICATIONS AND MEDIA

Books and Chapters

- "The Future of Journalism: Addressing Pervasive Market Failure with Public Policy," in R.W. McChesney and Victor Picard (eds.), *Will the Last Reporter Turn out the Lights* (New York: New Press, 2011)
- "Broadband in America: A Policy of Neglect is not Benign," in Enrico Ferro, Yogesh K. Dwivedi, J. Ramon Gil-Garcia, and Michael D. Williams, Eds., *Overcoming Digital Divides: Constructing an Equitable and Competitive Information Society*, IGI Global Press, 2009.
- "Political Action And Internet Organization: An Internet-Based Engagement Model," in Todd Davies and Seeta Pena Gangaharian, Eds., *Online Deliberation: Design, Research and Practice*, CSLI press.
- "When Counting Counts: Marrying Advocacy and Academics in the Media Ownership Research Wars at the FCC," forthcoming in Lynn M. Harter, Mohan J. Dutta, and Courtney Cole, Eds., *Communicating for Social Impact: Engaging Communication Theory, Research, and Pedagogy*, Hampton Press.
- The Case Against Media Consolidation* (Donald McGannon Communications Research Center, 2007)
- Open Architecture as Communications Policy* (Stanford Law School, Center for Internet and Society: 2004)
- Media Ownership and Democracy in the Digital Information Age: Promoting Diversity with First Amendment Principles and Rigorous Market Structure Analysis* (Stanford Law School, Center for Internet and Society: 2003)
- Cable Mergers and Monopolies: Market Power In Digital Media and Communications Networks* (Washington, D.C.: Economic Policy Institute, 2002)
- "When Law and Social Science Go Hand in Glove: Usage and Importance of Local and National News Sources, Critical Questions and Answers for Media Market Analysis," forthcoming in, Philip Napoli, Ed. *Media Diversity and Localism: Meaning and Metrics*, (Lawrence Erlbaum, 2007)
- "The Importance of Open Networks in Sustaining the Digital Revolution," in Thomas M. Lenard and Randolph J. May (Eds.) *Net Neutrality or Net Neutering* (New York, Springer, 2006)
- "Reclaiming The First Amendment: Legal, Factual And Analytic Support For Limits On Media Ownership," Robert McChesney and Benn Scott (Eds), *The Future of Media* (Seven Stories Press, 2005)
- "Building A Progressive Media And Communications Sector," Elliot Cohen (Ed.), *News Incorporated: Corporate Media Ownership And Its Threat To Democracy* (Prometheus Books, 2005)

“Hyper-Commercialism In The Media: The Threat To Journalism And Democratic Discourse,” Snyder-Gasher-Compton-(Eds), *Converging Media, Diverging Politics: A Political Economy Of News In The United States And Canada* (Lexington Books, 2005)

“The Digital Divide Confronts the Telecommunications Act of 1996: Economic Reality versus Public Policy,” in Benjamin M. Compaine (Ed.), *The Digital Divide: Facing a Crisis or Creating a Myth?* (Cambridge: MIT Press, 2001)

Articles and Papers:

“Business data services after the 1996 Act: Structure, Conduct, Performance in the Core of the Digital Communications Network The Failure of Potential Competition to Prevent Abuse of Market Power,” Telecommunications Policy Research Conference, September, 2016.

“The ICT Revolution in Historical Perspective: Progressive Capitalism as a Response to Free Market Fanaticism and Marxist Complaints in the Deployment Phase of the Digital Mode of Production.” *Telecommunication Policy Research Conference Session on Innovation*, September 28, 2015.

“The Long History and Increasing Importance of Public Service Principles For 21st Century Public Digital Communications Networks,” *Journal on Telecommunications and High Technology Law*, 2014

“From the Public Switched Telephone Network to the Public Digital Communications Network: Interconnection, Interoperability, Universal Service & Innovation at the Edge,” *Interconnection Policy for the Internet Age, The Digital Broadband Migration: The Future of Internet-Enabled Innovation, Silicon Flatirons*, February 10-11, 2013

“Why Growing Up is Hard to Do: Institutional Challenges for Internet Governance in the “Quarter Life Crisis of the of the Digital Revolution,” *Journal on Telecommunications and High Technology Law*, 2013. 11(1).

“Structured Viral Communications: The Political Economy and Social Organization of Digital Disintermediation,” *Journal on High Telecommunications and High Technology Law*, 9:1, 2011.

“Crowd Sourcing Enforcement: Building a Platform for Participatory Regulation in the Digital Information Age,” presentation at *The Digital Broadband Migration: The Dynamics of Disruptive Innovation, Silicon Flatirons Ctr.* Feb. 12, 2011

“The Central Role of Wireless in the 21st Century Communications Ecology: Adapting Spectrum and Universal Service Policy to the New Reality,” *Telecommunications Policy Research Conference*, September 2011

“Round #1 in the Digital Intellectual Property Wars: Economic Fundamentals, Not Piracy, Explain How Consumers and Artists Won in the Music Sector,” Telecommunications Policy Research Conference, September 2008.

“When The Market Does Not Reign Supreme: Localism And Diversity In U.S. Media Policy,” *International Communications Association*, forthcoming, May 2008

“Minority Programming: Still at The Back of the Bus,” *International Communications Association*, May 2008, with Adam Lynn

“Traditional Content Is Still King as the Source of Local News and Information,” *International Communications Association*, forthcoming, May 2008

“Junk Science And Administrative Abuse In The Effort Of The FCC To Eliminate Limits On Media Concentration,” *International Communications Association*, May 2008.

“Contentless Content Analysis: Flaws In The Methodology For Analyzing The Relationship Between Media Bias And Media Ownership,” forthcoming, *International Communications Association*, May 2008.

“Network Neutrality,” *Toll Roads? The Legal and Political Debate Over Network Neutrality*, University of San Francisco Law School, January 26, 2008

“The Lack of Racial and Gender Diversity in Broadcast Ownership and The Effects of FCC Policy: An Empirical Analysis,” *Telecommunications Research Policy Conference*, September 2007, with Derek Turner

“New Media and Localism: Are Local Cable Channels and Locally Focused Websites Significant New and Diverse Sources of Local News and Information? An Empirical Analysis,” *Telecommunications Research Policy Conference*, September 2007, with Adam Lynn

“A Case Study of Why Local Reporting Matters: Photojournalism Framing of the Response to Hurricane Katrina in Local and National Newspapers,” *International Communications Association*, May 2007.

- “Will the FCC Let Local Media Rise from the Ashes of Conglomerate Failure,” *International Communications Association*, May 2007.
- “The Failure of Federal Authorities to Protect American Energy Consumers From Market Power and Other Abusive Practices,” *Loyola Consumer Law Review*, 19:4 (2007)
- “The Central Role of Network Neutrality in the Internet Revolution,” *Public Interest Advocacy Center*, Ottawa Canada, November 24, 2006
- “Governing the Spectrum Commons,” September 2006. *Telecommunications Policy Research Conference*, October 2006
- “Accessing the Knowledge Commons in the Digital Information Age,” *Consumer Policy Review*, May/June 2006
- “Independent, Non-Commercial Video,” *Beyond Broadcast*, Berkman Center, Harvard University, May 12, 2006
- “Defining Appropriation Right in the Knowledge Commons of the Digital Information Age: Rebalancing the Role of Private Incentives and Public Circulation in Granting Intellectual Monopoly Privileges,” *Legal Battle Over Fair Use, Copyright, and Intellectual Property*, March 25, 2006
- “The Economics of Collaborative Production: A Framework for Analyzing the Emerging Mode of Digital Production,” *The Economics of Open Content: A Commercial Noncommercial Forum*, MIT January 23, 2006
- “From Wifi to Wikis and Open Source: The Political Economy of Collaborative Production in the Digital Information Age,” *Journal on Telecommunications and High Technology Law*, 5:1, 2006
- “Information is a Public Good,” *Extending the Information Society to All: Enabling Environments, Investment and Innovation, World Summit on the Information Society*, Tunis, November 2005
- “The Importance of Collateral Communications and Deliberative Discourse in Building Internet-Based Media Reform Movements,” *Online Deliberation: Design, Research and Practice/DIAC*, November, 2005
- “Collaborative Production in Group-Forming Networks: The 21st Century Mode of Information Production and the Telecommunications Policies Necessary to Promote It,” *The State of Telecom: Taking Stock and Looking Ahead*, Columbia Institute on Tele-Information, October 2005
- “The Economics of Collaborative Production in the Spectrum Commons,” *IEEE Symposium on New Frontiers in Dynamic Spectrum Access Networks*, November 2005
- “Independent Noncommercial Television: Technological, Economic and Social Bases of A New Model of Video Production,” *Telecommunications Policy Research Conference*, October 2005
- “Spectrum as Speech in the 21st Century,” *The Public Airwaves as a Common Asset and a Public Good: Implications for the Future of Broadcasting and Community Development in the U.S.*, Ford foundation, March 11, 2005
- “When Law and Social Science Go Hand in Glove: Usage and Importance of Local and National News Sources, Critical Questions and Answers for Media Market Analysis, Telecommunications Policy Research Conference, October 2004
- “Dividing the Nation, Digitally: When a Policy Of Neglect is Not Benign,” *The Impact of the Digital Divide on Management and Policy: Determinants and Implications of Unequal Access to Information Technology*, Carlson School of Management, University of Minnesota, August 28, 2004.
- “Limits on Media Ownership are Essential,” *Television Quarterly*, Spring Summer 2004
- “Applying the Structure, Conduct Performance Paradigm of Industrial Organization to the Forum for Democratic Discourse,” *Media Diversity and Localism, Meaning, Metrics and Public Interest*, Donald McGannon Communications Research Center, Fordham University, December 2003
- “Cable Market Power, Pricing And Bundling After The Telecommunications Act Of 1996: Explorations Of Anti-Consumer, Anticompetitive Practices,” *Cable TV Rates: Has Deregulation Failed?*, Manhattan Institute, November 2003
- “Hope And Hype Vs. Reality: The Role Of The Commercial Internet In Democratic Discourse And Prospects For Institutional Change,” *Telecommunication Policy Research Conference*, September 21, 2003
- “Ten Principles For Managing The Transition To Competition In Local Telecommunications Markets, *Triennial Review Technical Workshop National Association of Regulatory Utility Commissioners*, Denver CO, July 27, 2003

- "Universal Service: A Constantly Expanding Goal," *Consumer Perspectives on Universal Service: Do Americans Lose Under a Connection-based Approach?* (Washington, D.C.: New Millennium Research Council, June 2003)
- "The Evidence Is Overwhelming: Diversity, Localism And The Public Interest Are The Victims Of Concentration, Conglomeration And Consolidation Of The Commercial Mass Media Concentration And Local Markets," The Information Policy Institute and The Columbia Institute On Tele-Information The National Press Club, Washington, DC, March 11, 2003
- "Loss Of Diversity, Localism And Independent Voices Harms The Public Interest: Some Recent Examples," *The Information Policy Institute and The Columbia Institute On Tele-Information* The National Press Club, Washington, DC, March 11, 2003
- "Open Communications in Open Economies and Open Societies: Public Interest Obligations are Vital in the Digital Information Age," *Convergence: Broadband Policy and Regulation Issues for New Media Businesses in the New Millennium* Georgetown University Law Center, Advanced Computer and Internet Law Institute March 5, 2003.
- "The Political Economy Of Spectrum Policy: Unlicensed Use Wins Both The Political (Freedom Of Speech) And Economic (Efficiency) Arguments," *Spectrum Policy: Property Or Commons?* Stanford Law School, March 1, 2003
- "What's 'New' About Telecommunications in the 21st Century Economy: Not Enough to Abandon Traditional 20th century Public Interest Values" *Models of Regulation For the New Economy*, University of Colorado School of Law, February 1, 2003
- "Comments on *Broadband: Bringing Home the Bits*, *Columbia Institute for Tele-Information*, March 18, 2002
- "Fair Use and Innovation First, Litigation Later: Why digitally Retarding Media (DRM) Will slow the Transition to the Digital Information Age," *Online Committee, Federal Communications Bar Association*, January 29, 2003 "Open Communications Platforms: Cornerstone of Innovation and Democratic Discourse In the Internet Age," *Journal on Telecommunications, Technology and Intellectual Property*, 2:1, 2003,
- "Foundations And Principles Of Local Activism In The Global, New Economy," *The Role of Localities and States in Telecommunications Regulation: Understanding the Jurisdictional Challenges in an Internet Era*, University of Colorado Law School, April 16, 2001
- "The Role Of Technology And Public Policy In Preserving An Open Broadband Internet," *The Policy Implications Of End-To-End*, Stanford Law School, December 1, 2000
- "Inequality In The Digital Society: Why The Digital Divide Deserves All The Attention It Gets," *Cardozo Arts and Entertainment Law Journal*, 2002, first presented at [Bridging The Digital Divide: Equality In The Information Age](#), Cardozo School Of Law, November 15, 2000
- "Picking Up The Public Policy Pieces Of Failed Business And Regulatory Models," *Setting The Telecommunications Agenda*, Columbia Institute For Tele-Information November 3, 2000
- "Progressive, Democratic Capitalism In The Digital Age," *21st Century Technology and 20th Century Law: Where Do We Go from Here? The Fund for Constitutional Government, Conference on Media, Democracy and the Constitution*, September 27, 2000
- "Open Access To The Broadband Internet: Technical And Economic Discrimination In Closed, Proprietary Networks," *University of Colorado Law Review*, Vol. 69, Fall 2000
- "Antitrust As Consumer Protection In The New Economy: Lessons From The Microsoft Case," *Hastings Law Journal*, 52: 4, April 2001, first presented at *Conference On Antitrust Law In The 21st Century Hasting Law School*, February 10, 2000
- "Evolving Concepts of Universal Service," *The Federalist Society*, October 18, 1996
- "Delivering the Information Age Now," *Telecom Infrastructure: 1993, Telecommunications Reports*, 1993
- "Divestiture Plus Four: Take the Money and Run," *Telematics*, January 1988
- "Regulatory Reform in Telecommunications: A Solution in Search of a Problem," *Telematics*, 4:11, November 1987.
- "The Line of Business Restriction on the Regional Bell Operating Companies: A Plain Old Anti-trust Remedy for a Plain Old Monopoly," Executive Leadership Seminar on Critical Policy Developments in Federal Telecommunications Policy, The Brookings Institution, October 7, 1987

"The Downside of Deregulation: A Consumer Perspective After A Decade of Regulatory Reform," *Plenary Session, Consumer Assembly*, February 12, 1987

"Regulatory Reform for Electric Utilities, Plenary Session, *Consumer Federation of American, Electric Utility Conference*, April 4, 1987

"Round Two in the Post-Divestiture Era: A Platform for Consumer Political Action," *Conference on Telephone Issues for the States -- 1984: Implementing Divestiture*, May, 1984

Research Reports

Digital Disintermediation and Copyright in the 21st Century: Lessons From The Transformation Of The Music Sector, November 2013

E-Book Price Fixing Violates The Antitrust Laws And Harms Consumers, April 9, 2012

Efficiency Gains and Consumer Benefits of Unlicensed Access to the Public Airwaves: the Dramatic Success of Combining Market Principles and Shared Access, January 2012

The Impact of the Vertically Integrated, Television-Movie Studio Oligopoly on Source Diversity and Independent Production, Independent Film and Television Association, October 2006

How Bigger Media Will Hurt Alaska, Arkansas, California, Florida, Maine, Michigan, Montana, Ohio, Oregon, Pennsylvania, Tennessee, Texas, Virginia, Washington, Media and Democracy Coalition, October 2006

Mapping the Terrain in the Battle Over Access to Knowledge in the Digital Information Age (June 2006)

Online Deliberation: Mapping The Field; Tapping The Potential From The Perspective Of A Media/Internet Activist (August 2005)

Broken Promises and Strangled Competition: The Record of Baby Bell Merger and Market Opening Behavior (Consumer Federation of America, June 2005)

Over a Barrel: Why Aren't Oil Companies Using Ethanol to Lower Gasoline Prices? (Consumer Federation of America, May 2005)

Reflections Of A Media Activist On New Strategies For Justice: Linking Corporate Law With Progressive Social Movements (May 2005)

Time for the Recording Industry to Face the Music: The Political, Social and Economic Benefits of Peer-to-Peer Communications Networks (Consumer Federation of America, Consumers Union, Free press, U.S. Public Interest Research Group, March 2005)

Expanding the Digital Divide and Falling Behind in Broadband (Consumer Federation of America and Consumers Union, October 2004)

Time to Give Consumers Real Cable Choices: After Two Decades of Anti-consumer Bundling and Anti-Competitive Gate keeping (Consumer Federation of America and Consumers Union, July 2004)

The Public Interest in Open Communications Networks (Consumer Federation of America, July 2004)

Caution Flag in the FCC's Race to Eliminate the Unbundled Network Element Platform (consumer Federation of America, June 2003)

New Survey Finds Americans Rely on Newspapers Much More than Other Media for Local News and Information: FCC Media Ownership Rules Based on Flawed Data (Consumer Federation of America, Consumers Unions, January 2004)

Cable Market Power, Pricing And Bundling After The Telecommunications Act Of 1996: Explorations Of Anti-Consumer, Anticompetitive Practices (Consumer Federation of America and Consumers Union, November 2003)

Competition At The Crossroads: Can Public Utility Commissions Save Local Phone Competition? (Consumer Federation of America, October 7, 2003)

Free TV Swallowed by Media Giants: The Way It Really Is, September 15, 2003 (Consumer Federation of America, Consumers Union and Center for Digital Democracy, September 15, 2003)

Abracadabra! Hocus-Pocus! Making Media Market Power Disappear With The FCC's Diversity Index (Consumer Federation of America and Consumers Union, July 2003)

Promoting The Public Interest Through Media Ownership Limits: A Critique Of The FCC's Draft Order Based On Rigorous Market Structure Analysis And High Competitive Standards (Consumer Federation of America and Consumers Union, May 2003)

Public Opinion Opposes The FCC's March Toward Concentrated Media Markets (Consumer Federation of America, April 2003)

Democratic Discourse in the Digital Information Age: Legal Principles and Economic Challenge (Consumer Federation of America, February 2003)

Cable Mergers, Monopoly Power and Price Increases (Consumer Federation of America and Consumers Union, January 2003)

Public Support for a Citizen-Friendly Media and Communications Industry in the Digital Age: A Review of Recent Survey Evidence (Consumer Federation of America, October 2002)

The Battle for Democratic Discourse: Recapturing a Bold Aspiration for the First amendment (Consumer Federation of America, October 2002)

Does the Digital Divide Still Exist? Bush Administration Shrugs, But Evidence Says "Yes" (Consumer Federation of America, Consumers Union, Civil Rights Forum, May 30, 2002)

The Failure of 'Intermodal Competition in Cable and Communications Markets (Consumer Federation of America and Consumers Union, April, 2002).

Competitive Processes, Anticompetitive Practices and Consumer Harm in the Software Industry: An Analysis of the Inadequacies of the Microsoft-Department of Justice Proposed Final Judgment (Jan. 25, 2002)

A Roadblock On The Information Superhighway: Anticompetitive Restrictions On Automotive Markets (Consumer Federation of America, February 2001)

Lessons From 1996 Telecommunications Act: Deregulation Before Meaningful Competition Spells Consumer Disaster (Consumer Federation of America, February 2000)

Florida Consumers Need Real Local Phone Competition: Access To Monopoly Wires Is The Key (Consumer Federation of America, January 2001)

The Real Deal: The Comparative Value of Verizon's Local Telephone Rates (New Jersey Citizen Action, December 2000)

Maryland Consumers Need Real Local Phone Competition: Fair Access to Monopoly Wires Is the Key (Consumer Federation of America, December 7, 2000)

Bailing Out Of A Bad Business Strategy: Policymakers Should Not Sacrifice Important Public Policies To Save AT&T's Failed Business Plans (Consumer Federation of America, October 2000)

Setting The Record Straight From A Consumer Perspective On Verizon's Radical Rate Restructuring Proposal (Citizen Action, October 2000)

Disconnected, Disadvantaged and Disenfranchised (Consumer Federation of America and Consumers Union, October 11, 2000)

Open Access Phase II (Consumer Federation of America, July 13, 2000)

Who Do You Trust? AOL And AT&T ... When They Challenge The Cable Monopoly Or AOL And AT&T. When They Become The Cable Monopoly?, (Consumer Federation of America, Consumers Union and Media Access Project, February 2000)

Monopoly Power, Anticompetitive Business Practices and Consumer Harm in the Microsoft Case (Consumer Federation of America, December 1999)

Keeping the Information Superhighway Open for the 21st Century (Consumer Federation of America, December 1999)

Creating Open Access to the Broadband Internet: Overcoming Technical and Economic Discrimination in Closed, Proprietary Network (Consumer Federation of America, December 1999)

The Consumer Harm Caused By The Microsoft Monopoly: The Facts Speak For Themselves And They Call For A Stern Remedy (Consumer Federation of America, November 1999)

A Consumer Perspective On Economic, Social And Public Policy Issues In The Transition To Digital Television: Report Of The Consumer Federation Of America To People For Better TV (Consumer Federation of America, October 29, 1999)

Transforming the Information Superhighway into a Private Toll Road: Ma Cable and Baby Bell Efforts to Control the High-Speed Internet (Consumer Federation of America, October 1999)