David G. Loomis

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Education

Doctor of Philosophy, Economics, Temple University, Philadelphia, Pennsylvania, May 1995.

Bachelor of Arts, Mathematics and Honors Economics, Temple University, Magna Cum Laude, May 1985.

Experience

<u>1996-present</u> Illinois State University, Normal, IL Full Professor – Department of Economics (2010-present) Associate Professor - Department of Economics (2002-2009) Assistant Professor - Department of Economics (1996-2002)

- Taught Regulatory Economics, Telecommunications Economics and Public Policy, Industrial Organization and Pricing, Individual and Social Choice, Economics of Energy and Public Policy and a Graduate Seminar Course in Electricity, Natural Gas and Telecommunications Issues.
- Supervised as many as 5 graduate students in research projects each semester.
- Served on numerous departmental committees.

1997-present Institute for Regulatory Policy Studies, Normal, IL

Executive Director (2005-present)

Co-Director (1997-2005)

- Grew contributing membership from 5 companies to 16 organizations.
- Doubled the number of workshop/training events annually.
- Supervised 2 Directors, Administrative Staff and internship program.
- Developed and implemented state-level workshops concerning regulatory issues related to the electric, natural gas, and telecommunications industries.

2006-present Illinois Wind Working Group, Normal, IL Director

- Founded the organization and grew the organizing committee to over 200 key wind stakeholders
- Organized annual wind energy conference with over 400 attendees
- Organized strategic conferences to address critical wind energy issues
- Initiated monthly conference calls to stakeholders
- Devised organizational structure and bylaws

Experience (cont'd)

<u>2007-present</u> Center for Renewable Energy, Normal, IL **Director**

- Created founding document approved by the Illinois State University Board of Trustees and Illinois Board of Higher Education.
- Secured over \$150,000 in funding from private companies.
- Hired and supervised 4 professional staff members and supervised 3 faculty members as Associate Directors.
- Reviewed renewable energy manufacturing grant applications for Illinois Department of Commerce and Economic Opportunity for a \$30 million program.
- Created technical "Due Diligence" documents for the Illinois Finance Authority loan program for wind farm projects in Illinois.

<u>1997-2002</u> International Communications Forecasting Conference **Chair**

• Expanded Planning Committee with representatives from over 18 different international companies and delivered high quality conference attracting over 500 people over 4 years.

1985-1996 Bell Atlantic, Philadelphia, Pa.

Economist - Business Research

- Wrote and taught Applied Business Forecasting multimedia course.
- Developed and documented 25 econometric demand models that were used in regulatory filings.
- Provided statistical and analytic support to regulatory costing studies.
- Served as subject matter expert in switched and special access.
- Administered \$4 million budget including \$1.8 million consulting budget.

External Affiliations

Great Lakes Wind Collaborative – Steering Committee and Co-Chair, Transmission and Economic Development Workgroup

State Energy Sector Partnership – Board Member

Center for Emerging Entrepreneurs - Vice Chairman, Board of Advisors

Midwest Solar Training Network Solar Advisory Group

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Professional Awards and Memberships

2011 Midwestern Regional Wind Advocacy Award from the Department of Energy's Wind Powering America presented at WindPower 2011

2009 Economics Department Scott M. Elliott Faculty Excellence Award – awarded to faculty who demonstrate excellence in teaching, research and service.

2009 Illinois State University Million Dollar Club – awarded to faculty who have over \$1 million in grants through the university.

2008 Outstanding State Wind Working Group Award from the Department of Energy's Wind Power America presented at WindPower 2008.

1999 Illinois State University Teaching Initiative Award

Member of the American Economic Association, National Association of Business Economists, International Association for Energy Economics, Institute for Business Forecasters; Institute for International Forecasters, International Telecommunications Society.

Professional Publications

- 28. Loomis, D. G. and Bowden, N. S. (2013). Nationwide Database of Electric Rates to Become Available, *Natural Gas & Electricity*, 30 (5), 20-25.
- 27. Jin, J. H., **Loomis, D.G.,** and Aldeman, M. R. (2013). Optimum penetration of utility-scale grid-connected solar photovoltaic systems in Illinois, *Renewable Energy*, 60, 20-26.
- Malm, E., Loomis, D., DeFranco, J. (2012). A Campus Technology Choice Model with Incorporated Network Effects: Choosing Between General Use and Campus Systems, *International Journal of Computer Trends and Technology*, 3(4), 622-629.
- 25. Chupp, B. A., Hickey, E.A. & Loomis, D. G. (2012). Optimal Wind Portfolios in Illinois, *Electricity Journal*, 25, 46-56.
- 24. Hickey, E., Loomis, D. G., & Mohammadi, H. (2012). Forecasting hourly electricity prices using ARMAX-GARCH models: An application to MISO hubs, *Energy Economics*, 34, 307-315.
- 23. Theron, S., Winter, J.R, Loomis, D. G., & Spaulding, A. D. (2011). Attitudes Concerning Wind Energy in Central Illinois. *Journal of the America Society* of Farm Managers and Rural Appraisers, 74, 120-128.

Professional Publications (cont'd)

- 22. Payne, J. E., **Loomis, D. G.** & Wilson, R. (2011). Residential Natural Gas Demand in Illinois: Evidence from the ARDL Bounds Testing Approach. *Journal of Regional Analysis and Policy*, 41(2), 138.
- 21. Loomis, D. G. & Ohler, A. O. (2010). Are Renewable Portfolio Standards A Policy Cure-all? A Case Study of Illinois's Experience. *Environmental Law and Policy Review*, *35*, 135-182.
- 20. Gil-Alana, L. A., Loomis, D. G., & Payne, J. E. (2010). Does energy consumption by the U.S. electric power sector exhibit long memory behavior? *Energy Policy*, 38, 7512-7518.
- Carlson, J. L., Payne, J. E., & Loomis, D. G. (2010). An assessment of the Economic Impact of the Wind Turbine Supply Chain in Illinois. *Electricity Journal*, 13, 75-93.
- 18. Apergis, N., Payne, J. E., & Loomis, D. G. (2010). Are shocks to natural gas consumption transitory or permanent? *Energy Policy, 38*, 4734-4736.
- 17. Apergis, N., Payne, J. E., & **Loomis, D. G.** (2010). Are fluctuations in coal consumption transitory or permanent? Evidence from a panel of U.S. states. *Applied Energy*, *87*, 2424-2426.
- Hickey, E. A., Carlson, J. L., & Loomis, D. G. (2010). Issues in the determination of the optimal portfolio of electricity supply options. *Energy Policy*, 38, 2198-2207.
- 15. Carlson, J. L., & **Loomis, D. G.** (2008). An assessment of the impact of deregulation on the relative price of electricity in Illinois. *Electricity Journal, 21*, 60-70.
- 14. Loomis, D. G., (2008). The telecommunications industry. In H. Bidgoli (Ed.), *The handbook of computer networks* (pp. 3-19). Hoboken, NJ: John Wiley & Sons.
- Cox, J. E., Jr., & Loomis, D. G. (2007). A managerial approach to using error measures in the evaluation of forecasting methods. *International Journal* of Business Research, 7, 143-149.
- 12. Cox, J. E., Jr., & Loomis, D. G. (2006). Improving forecasting through textbooks a 25 year review. *International Journal of Forecasting*, 22, 617-624.
- Swann, C. M., & Loomis, D. G. (2005). Competition in local telecommunications – there's more than you think. *Business Economics*, 40, 18-28.

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Professional Publications (cont'd)

- 10. Swann, C. M., & **Loomis, D. G.** (2005). Intermodal competition in local telecommunications markets. *Information Economics and Policy, 17, 97-113*.
- 9. Swann, C. M., & **Loomis, D. G.** (2004) Telecommunications demand forecasting with intermodal competition a multi-equation modeling approach. *Telektronikk*, *100*, 180-184.
- 8. Cox, J. E., Jr., & Loomis, D. G. (2003). Principles for teaching economic forecasting. *International Review of Economics Education*, 1, 69-79.
- 7. Taylor, L. D. & Loomis, D. G. (2002). Forecasting the internet: understanding the explosive growth of data communications. Boston: Kluwer Academic Publishers.
- Wiedman, J. & Loomis, D. G. (2002). U.S. broadband pricing and alternatives for internet service providers. In D. G. Loomis & L. D. Taylor (Eds.) Boston: Kluwer Academic Publishers.
- Cox, J. E., Jr. & Loomis, D. G. (2001). Diffusion of forecasting principles: an assessment of books relevant to forecasting. In J. S. Armstrong (Ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners* (pp. 633-650). Norwell, MA: Kluwer Academic Publishers.
- 4. Cox, J. E., Jr. & Loomis, D. G. (2000). A course in economic forecasting: rationale and content. *Journal of Economics Education*, 31, 349-357.
- 3. Malm, E. & Loomis, D. G. (1999). Active market share: measuring competitiveness in retail energy markets. *Utilities Policy, 8, 213-221.*
- Loomis, D. G. (1999). Forecasting of new products and the impact of competition. In D. G. Loomis & L. D. Taylor (Eds.), *The future of the telecommunications industry: forecasting and demand analysis.* Boston: Kluwer Academic Publishers.
- Loomis, D. G. (1997). Strategic substitutes and strategic complements with interdependent demands. *The Review of Industrial Organization*, 12, 781-791.

Presentations

"National Utility Rate Database," presented October 23, 2013 at Solar Power International, Chicago, IL.

"Potential Economic Impact of Offshore Wind Energy in the Great Lakes," presented September 23, 2013 at Great Lakes Wind Collaborative Annual Meeting, Columbus, OH.

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"Potential Economic Impact of Offshore Wind Energy in the Great Lakes," presented May 6, 2013 at WindPower 2013, Chicago, IL.

"Why Illinois? Windy City, Prairie Power," presented May 5, 2013 at WindPower 2013, Chicago, IL.

"Siting Illinois Wind Energy," testified April 23, 2013 before the Boone County Board, Belvidere, IL.

"Illinois Wind Energy," Emerging Illinois Electric Topics Conference, Electrical Board of Missouri and Illinois, March 12& 19, 2013 in Collinsville, II and Bloomington, IL.

"National Utility Rate Database," presented January 29, 2013 at the EUEC Conference, Phoenix, AZ.

"Energy Learning Exchange and Green Jobs," presented December 13, 2012 at the TRICON Meeting of Peoria and Tazewell County Counselors, Peoria, IL.

"Paradigm Bio-Aviation and the Center for Renewable Energy," presented December 10, 2012 at the Bloomington City Council Meeting, Bloomington, IL.

"Potential Economic Impact of Offshore Wind Energy in the Great Lakes," presented November 12, 2012 at the Offshore Wind Jobs and Economic Development Impacts Webinar.

"Energy Learning Exchange," presented October 31, 2012 at the Utility Workforce Development Meeting, Chicago, IL.

"Potential Economic Impact of Offshore Wind Energy in the Great Lakes," presented September 26, 2012 at the Great Lakes Wind Collaborative's Fifth Annual Meeting, Erie, PA.

"Energy-Related Research at ISU," presented July 18, 2012 at the Sixth Annual Advancing Wind Power in Illinois Conference, Normal, IL.

"Illinois Wind Energy," presented July 17, 2012 at the Sixth Annual Advancing Wind Power in Illinois Conference, Normal, IL.

"Wind Energy in McLean County," presented June 26, 2012 at BN By the Numbers, Normal, IL.

"Wind Energy," presented June 14, 2012 at the Wind for Schools Statewide Teacher Workshop, Normal, IL.

"National Utility Rate Database," presented June13, 2012 at the Department of Energy SunShot Conference, Denver, CO.

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"Economic Impact of Wind Energy in Illinois," presented June 6, 2012 at AWEA's WINDPOWER 2012, Atlanta, GA.

"National Utility Rate Database," presented April 26, 2012 at the IRPS Conference, Springfield, IL.

"Wind Farms in Your Community," presented April 19, 2012 to the University of Illinois Extension Teleconference: Siting and Permitting Wind Farms in Illinois.

"Wind Farms in Your Community," presented April 12, 2012 to the Whiteside County Board and Whiteside County Planning and Zoning Committee, Whiteside County, IL.

"Wind Energy 101," presented March 29, 2012 to the Presidential Scholars, Illinois State University, Normal, IL.

"Trends in Illinois Wind Energy," presented March 6, 2012 at the AWEA Regional Wind Energy Summit – Midwest in Chicago, IL.

"Trends in Illinois Wind Energy," presented February 8, 2012 at the Illinois Wind Working Group Siting, Taxing and Zoning of Wind Farms, Normal, IL.

"Center for Renewable Energy Overview," presented December 2, 2011 at the Midwest Energy Policy Conference in St. Louis, MO.

"Challenges and New Growth Strategies in the Wind Energy Business," invited plenary session speaker at the Green Revolution Leaders Forum, November 18, 2011 in Seoul, South Korea.

"Economic Impact of Wind Farms," presented August 26, 2011 at the Illinois Department of Commerce and Economic Opportunity Peer Exchange, Peru, IL.

"Current Research by the Center for Renewable Energy," presented July 22, 2011 at the Fifth Annual Advancing Wind Power in Illinois Conference in Chicago, IL.

"Overview of the Center for Renewable Energy," presented July 20, 2011 at the University-Industry Consortium Meeting at Illinois Institute of Technology, Chicago, IL.

"Building the Wind Turbine Supply Chain," presented May 11, 2011 at the Supply Chain Growth Conference, Chicago, IL

"Building a Regional Energy Policy for Economic Development," presented April 4, 2011 at the Midwestern Legislative Conference's Economic Development Committee Webinar.

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"Wind Energy 101," presented February 7, 2011 at the Wind Power in Central Illinois - A Public Forum, CCNET Renewable Energy Group, Champaign, IL.

"Overview of County Wind Farm Activity," presented February 9, 2011 at the Illinois Wind Working Group Siting, Taxing and Zoning of Wind Farms, Normal, IL.

"Wind Energy 101," presented February 9, 2011 at the Illinois Wind Working Group Siting, Taxing and Zoning of Wind Farms, Normal, IL.

"Alternative Energy Strategies," presented with Matt Aldeman November 19, 2010 at the Innovation Talent STEM Education Forum, Chicago, IL.

"Siting and Zoning in Illinois," presented November 17, 2010 at the Wind Powering America Webinar.

"What Governor Quinn Should Do about Energy?" presented November 15, 2010 at the Illinois Chamber of Commerce Energy Forum Conference, Chicago, IL.

Oral Testimony before the Illinois Senate Energy and Environment Committee, Senator Jacobs presiding, October, 28, 2010, Chicago, IL.

"Is Wind Energy Development Right for Illinois," presented with Matt Aldeman October 28, 2010 at the Illinois Association of Illinois County Zoning Officials Annual Seminar in Utica, IL.

"Solar Market Transformation," presented October 29, 2010 at the Solar Market Transformation Conference in Normal, IL.

"Economic Impacts; Public Beliefs and Opinions," presented with Matt Aldeman October 28, 2010 at the Illinois Association of Illinois County Zoning Officials Annual Seminar in Utica, IL.

"Wind Energy Development in Illinois," presented with Matt Aldeman October 28, 2010 at the Illinois Association of Illinois County Zoning Officials Annual Seminar in Utica, IL.

"Latest Trends in Wind Energy," presented September 30, 2010 at the Soil and Water Conservation District Wind Farm Workshop in Normal, IL.

"Understanding the Economic Impact of Wind Energy in Illinois," presented September 20, 2010 at the Third Annual Meeting of the Great Lakes Wind Collaborative in Cleveland, OH.

"Economic Impact of Wind Energy in Illinois," presented July 28, 2010 at the Livingston County Zoning Board of Appeals Hearing in Pontiac, IL.

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"Renewable Energy," presented July 26, 2010 at the Children's Discovery Museum in Normal, IL.

"Economic Impact of Wind Energy in Illinois," presented July 22, 2010 at the AgriEnergy Conference in Champaign, IL.

"Renewable Energy Major at ISU," presented July 21, 2010 at Green Universities and Colleges Subcommittee Webinar.

"Center for Renewable Energy Research," presented July 15, 2010 at the Advancing Wind Power in Illinois Conference in Peoria, IL.

"Economic Impact of Wind Energy in Illinois," presented June 22, 2010 at the GLWC Presents: JEDI Analysis in the Great Lakes Webinar.

"From Wind Farms to Residential Wind and Solar: What's Happening in Illinois?," presented June 10, 2010 at the Eastern Illini Electric Cooperative Annual Meeting in Paxton, IL.

"Economics of Wind Energy," presented May 19, 2010 at the U.S. Green Building Council meeting in Chicago, IL.

"Economic Costs and Benefits of Wind Energy," presented May 7, 2010 at the Rockford Area Realtors Association meeting in Rockford, IL

"Forecasting: A Primer for the Small Business Entrepreneur," presented with James E. Cox, Jr. April 14, 2010 at the Allied Academies' Spring International Conference in New Orleans, LA.

"Wind Energy 101," presented March 10, 2010 at Peoria Christian School in Peoria, IL and March 30, 2010 at the Illinois State University Presidential Scholars Symposium in Normal, IL.

"Are Renewable Portfolio Standards a Policy Cure-All? A Case Study of Illinois' Experience," presented January 30, 2010 at the 2010 William and Mary Environmental Law and Policy Review Symposium in Williamsburg, VA.

"Creating Partnerships between Universities and Industry," presented November 19, 2009, at New Ideas in Educating a Workforce in Renewable Energy and Energy Efficiency in Albany, NY.

"Educating Illinois in Renewable Energy, presented November 14, 2009 at the Illinois Science Teachers Association in Peoria, IL.

"Green Collar Jobs," invited presentation October 14, 2009 at the 2009 Workforce Forum in Peoria, IL.

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"Economic Impact of Wind Energy in Illinois," presented August 11, 2009 at the AgriEnergy Conference in Champaign, IL.

"Economic Impact of Wind Energy in Illinois," presented July 16, 2009 at the Advancing Wind Power in Illinois Conference in Bloomington, IL.

"Illinois Wind Working Group," presented July 15, 2009 at the Advancing Wind Power in Illinois Conference in Bloomington, IL.

"Wind Energy," presented June 11, 2009 at State Farm Insurance Lunch 'n Learn in Bloomington, IL.

"Illinois Wind and Economic Development," with Wayne Hartel, presented June 4, 2009 at the Great Lakes Wind Collaborative Economic Development Group Webinar.

"The Economic Benefits of Wind Farms," presented May, 21, 2009 at the Central Illinois Economic Development Council Meeting in Normal, IL.

"The Role of Wind Power in Illinois," presented March 4, 2009 at the Association of Illinois Electric Cooperatives Engineering Seminar in Springfield, IL.

"The Economic Benefits of Wind Farms," presented January 30, 2009 at the East Central Illinois Economic Development District Meeting in Champaign, IL.

"Wind Energy 101," presented January 7, 2009 at the Northern Illinois Farm Show in DeKalb, Illinois.

"Green Collar Jobs in Illinois," presented January 6, 2009 at the Illinois Workforce Investment Board Meeting in Macomb, Illinois.

"Wind Energy 101," presented December 16, 2008 at the Landowner's Forum in Monmouth, Illinois; January 23, 2009 in Manito, IL; February 13, 2009 in Champaign, IL and Pontiac, IL; March 16, 2009 in Monmouth, IL; June 15, 2009 in Jacksonville, IL; October 7. 2009 in Chicago, IL; October 7, in Lemont, IL; November 9, 2009 in Ottawa, IL; December 9, 2009 in Pontiac, IL.

"Wind Energy 101," presented September 4, 2008 at the Chillicothe Rotary, Chillicothe, Illinois.

"Green Collar Jobs: What Lies Ahead for Illinois?" presented August 1, 2008 at the Illinois Employment and Training Association Conference.

"Wind Energy: What Lies Ahead for Illinois?" presented June 26, 2008 at the Advancing Wind Power in Illinois 2008 Conference.

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"Mapping Broadband Access in Illinois," presented October 16, 2007 at the Rural Telecon '07 conference.

"A Managerial Approach to Using Error Measures to Evaluate Forecasting Methods," presented October 15, 2007 at the International Academy of Business and Economics.

"Wind Energy: Is It Right For Illinois?" presented October 10, 2007 to DeKalb County Farm Bureau.

"Dollars and Sense: The Pros and Cons of Renewable Fuel," presented October 18, 2006 at Illinois State University Faculty Lecture Series.

"Broadband Access in Illinois," presented July 28, 2006 at the Illinois Association of Regional Councils Annual Meeting.

"Broadband Access in Illinois," presented November 17, 2005 at the University of Illinois' Connecting the e to Rural Illinois.

"Electricity, Natural Gas and Telecommunications," presented November 7, 2005 at Illinois Wesleyan University.

"Improving Forecasting Through Textbooks – A 25 Year Review," with James E. Cox, Jr., presented June 14, 2005 at the 25th International Symposium on Forecasting.

"Telecommunications Demand Forecasting with Intermodal Competition, with Christopher Swann, presented April 2, 2004 at the Telecommunications Systems Management Conference 2004.

Wind Energy at Illinois State University" presented March 4, 2004 at University of Illinois' Urban Planning Institute.

"Intermodal Competition," with Christopher Swann, presented April 3, 2003 at the Telecommunications Systems Management Conference 2003.

"Lectora Versus Presenter: Student and Instructor Reactions," presented March 26, 2003 at the Illinois State University Conference on Teaching with Technology.

"Intermodal Competition in Local Exchange Markets," with Christopher Swann, presented June 26, 2002 at the 20th Annual International Communications Forecasting Conference.

"Assessing Retail Competition," presented May 23, 2002 at the Institute for Regulatory Policy Studies' Illinois Energy Policy for the 21st Century workshop.

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"Tips, Tricks and Techniques for Telecom Forecasters," presented June 28, 2001 at the 19th Annual International Communications Forecasting Conference.

"The Devil in the Details: An Analysis of Default Service and Switching," with Eric Malm presented May 24, 2001 at the 20th Annual Advanced Workshop on Regulation and Competition.

"Resources for Forecasters," presented September 28, 2000 at the 18th Annual International Communications Forecasting Conference, Seattle, WA.

"Forecasting Challenges for U.S. Telecommunications with Local Competition," presented June 28, 1999 at the 19th International Symposium on Forecasting.

"Acceptance of Forecasting Principles in Forecasting Textbooks," presented June 28, 1999 at the 19th International Symposium on Forecasting.

"Forecasting Challenges for Telecommunications With Local Competition," presented June 17, 1999 at the 17th Annual International Communications Forecasting Conference.

"Measures of Market Competitiveness in Deregulating Industries," with Eric Malm, presented May 28, 1999 at the 18th Annual Advanced Workshop on Regulation and Competition.

"Trends in Telecommunications Forecasting and the Impact of Deregulation," <u>Proceedings of EPRI's 11th Forecasting Symposium</u>, 1998.

"Forecasting in a Competitive Age: Utilizing Macroeconomic Forecasts to Accurately Predict the Demand for Services," invited speaker, Institute for International Research Conference, September 29, 1997.

"Who Can you Trust? Using the Best Macroeconomic Forecasts," and "What's on the Internet in Telecommunications and Forecasting?" presented June 26, 1997 at the 1997 International Communications Forecasting Conference.

"Regulatory Fairness and Local Competition Pricing," presented May 30, 1996 at the 15th Annual Advanced Workshop in Regulation and Public Utility Economics.

"Optimal Pricing For Special Access Demand," presented July 8, 1993 at the 1993 National Telecommunications Forecasting Conference.

"Optimal Pricing For a Regulated Monopolist Facing New Competition: The Case of Bell Atlantic Special Access Demand," presented May 28, 1992 at the Rutgers Advanced Workshop in Regulation and Public Utility Economics.

"The FCC Price Cap Proposal: A Fairness Analysis," presented October 26, 1989 at the 1989 Business Research Conference.

Schedule DGL-1 Page 12 of 20 "The Fairness of Price Cap Regulation," presented April 14, 1989 at the Rutgers Advanced Workshop in Regulation and Public Utility Economics.

Grants

"SmartGrid for Schools," with William Hunter, Illinois Science and Energy Innovation Foundation, January 2014, \$451,701.

"Lake Michigan Offshore Wind Energy Buoy," with Matt Aldeman, Illinois Clean Energy Community Foundation, Request ID 6435, November, 2013, \$90,000.

"Teaching Next Generation Energy Concepts with Next Generation Science Standards," with William Hunter, Matt Aldeman and Amy Bloom, Illinois State Board of Education, RSP # 13B170A, October, 2013, second year, \$159,954.

"Solar for Schools," with Matt Aldeman, Illinois Green Economy Network, RSP # 13C280, August, 2013, \$66,072.

"Energy Learning Exchange Implementation Grant," with William Hunter and Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 13-052003, June, 2013, \$350,000.

"Teaching Next Generation Energy Concepts with Next Generation Science Standards," with William Hunter, Matt Aldeman and Amy Bloom, Illinois State Board of Education, RSP # 13B170, April, 2013, \$159,901.

"Illinois Sustainability Education SEP," Illinois Department of Commerce and Economic Opportunity, Award Number 08-431006, March, 2013, \$225,000.

"Illinois Pathways Energy Learning Exchange Planning Grant," with William Hunter and Matt Aldeman, Illinois State Board of Education (Source: U.S. Department of Education), RSP # 13A007, December, 2012, \$50,000.

"Illinois Sustainability Education SEP," Illinois Department of Commerce and Economic Opportunity, Award Number 08-431005, June 2011, amended March, 2012, \$98,911.

"Wind for Schools Education and Outreach," with Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 11-025001, amended February, 2012, \$111,752.

"A Proposal to Support Solar Energy Potential and Job Creation for the State of Illinois Focused on Large Scale Photovoltaic System," with Jin Jo (lead PI), Illinois Department of Commerce and Economic Opportunity, Award Number 12-025001, January 2012, \$135,000.

"National Database of Utility Rates and Rate Structure," U.S. Department of Energy, Award Number DE-EE0005350TDD, 2011-2014, \$850,000.

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Grants (cont'd)

"Illinois Sustainability Education SEP," Illinois Department of Commerce and Economic Opportunity, Award Number 08-431005, June 2011, \$75,000.

"Wind for Schools Education and Outreach," with Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 11-025001, March 2011, \$190,818.

"Using Informal Science Education to Increase Public Knowledge of Wind Energy in Illinois," with Amy Bloom and Matt Aldeman, Scott Elliott Cross-Disciplinary Grant Program, February 2011, \$13,713.

"Wind Turbine Market Research," with Matt Aldeman, Illinois Manufacturers Extension Center, May, 2010, \$4,000.

"Petco Resource Assessment," with Matt Aldeman, Petco Petroleum Co., April, 2010 amended August 2010 \$34,000; original amount \$18,000.

"Wind for Schools Education and Outreach," with Anthony Lornbach and Matt Aldeman, Scott Elliott Cross-Disciplinary Grant Program, February, 2010, \$13,635.

"IGA IFA/ISU Wind Due Diligence," Illinois Finance Authority, November, 2009, \$8,580 amended December 2009; original amount \$2,860.

"Green Industry Business Development Program, with the Shaw Group and Illinois Manufacturers Extension Center, Illinois Department of Commerce and Economic Opportunity, Award Number 09-021007, August 2009, \$245,000.

"Wind Turbine Workshop Support," Illinois Department of Commerce and Economic Opportunity, June 2009, \$14,900.

"Illinois Wind Workers Group," with Randy Winter, U.S. Department of Energy, Award Number DE-EE0000507, 2009-2011, \$107,941.

"Wind Turbine Supply Chain Study," with J. Lon Carlson and James E. Payne, Illinois Department of Commerce and Economic Opportunity, Award Number 09-021003, April 2009, \$125,000.

"Renewable Energy Team Travel to American Wind Energy Association WindPower 2009 Conference, Center for Mathematics, Science and Technology, February 2009, \$3,005.

"Renewable Energy Educational Lab Equipment," with Randy Winter and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), February, 2008, \$232,600.

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Grants (cont'd)

"Proposal for New Certificate Program in Electricity, Natural Gas and Telecommunications Economics," with James E. Payne, Extended Learning Program Grant, April, 2007, \$29,600.

"Illinois Broadband Mapping Study," with J. Lon Carlson and Rajeev Goel, Illinois Department of Commerce and Economic Opportunity, Award Number 06-205008, 2006-2007, \$75,000.

"Illinois Wind Energy Education and Outreach Project," with David Kennell and Randy Winter, U.S. Department of Energy, Award Number DE-FG36-06GO86091, 2006-2010, \$990,000.

"Wind Turbine Installation at Illinois State University Farm," with Doug Kingman and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), May, 2004, \$500,000.

"Illinois State University Wind Measurement Project," Doug Kingman and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), with August, 2003, \$40,000.

"Illinois State University Wind Measurement Project," with Doug Kingman and David Kennell, NEG Micon matching contribution, August, 2003, \$65,000.

"Distance Learning Technology Program," Illinois State University Faculty Technology Support Services, Summer 2002, \$3,000.

"Providing an Understanding of Telecommunications Technology By Incorporating Multimedia into Economics 235," Instructional Technology Development Grant (peer-reviewed), January 15, 2001, \$1,400.

"Using Real Presenter to create a virtual tour of GTE's Central Office," with Jack Chizmar, Instructional Technology Literacy Mentoring Project Grant (peerreviewed), January 15, 2001, \$1,000.

"An Empirical Study of Telecommunications Industry Forecasting Practices," with James E. Cox, College of Business University Research Grant (peer-reviewed), Summer, 1999, \$6,000.

"Ownership Form and the Efficiency of Electric Utilities: A Meta-Analytic Review" with L. Dean Hiebert, *Institute for Regulatory Policy Studies* research grant (peer-reviewed), August 1998, \$6,000.

Total Grants: \$5,536,583

External Funding

Corporate Funding for *Institute for Regulatory Policy Studies*, Ameren (\$7,500), Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500);Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Energy Efficiency Alliance (\$4,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2014, \$112,000 total.

Corporate Funding for Energy Learning Exchange, Calendar Year 2013, \$53,000.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2013, \$17,097.

Corporate Funding for *Institute for Regulatory Policy Studies*, Ameren (\$7,500), Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500);Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2013, \$97,500 total.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2012, \$29,325.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2012, \$16,060.

Corporate Funding for *Institute for Regulatory Policy Studies*, Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500);Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2012, \$90,000 total.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2011, \$57,005.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2011, \$13,562.

Corporate Funding for *Institute for Regulatory Policy Studies*, Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500);Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2011, \$90,000 total.

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Corporate Funding for *Center for Renewable Energy,* Calendar Year 2010, \$50,000.

Corporate Funding for *Illinois Wind Working Group*, Calendar Year 2010, \$49,000.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Lon Carlson, Fiscal Year 2010, \$17,759.

Corporate Funding for *Institute for Regulatory Policy Studies*, Alliance Pipeline (\$7,500); Ameren (\$7,500); AT&T (\$7,500);Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2010, \$82,500 total.

Corporate Funding for *Illinois Wind Working Group*, Calendar Year 2009, \$57,140.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Lon Carlson, Fiscal Year 2009, \$21,988.

Corporate Funding for *Institute for Regulatory Policy Studies*, Alliance Pipeline (\$7,500); Ameren (\$7,500); AT&T (\$7,500);Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); MidAmerican Energy (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2009, \$82,500 total.

Corporate Funding for *Center for Renewable Energy,* Calendar Year 2008, \$157,500.

Corporate Funding for *Illinois Wind Working Group*, Calendar Year 2008, \$38,500.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Lon Carlson, Fiscal Year 2008, \$28,489.

Corporate Funding for *Institute for Regulatory Policy Studies*, Alliance Pipeline (\$5,000); Ameren (\$5,000); AT&T (\$5,000);Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); Peabody Energy (\$5,000), People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); Fiscal Year 2008, \$60,000 total.

Corporate Funding for *Illinois Wind Working Group*, Calendar Year 2007, \$16,250.

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Workshop Surplus for *Institute for Regulatory Policy Studies*, with Lon Carlson, Fiscal Year 2007, \$19,403.

Corporate Funding for *Institute for Regulatory Policy Studies*, AARP (\$3,000), Alliance Pipeline (\$5,000), Ameren (\$5,000); Citizens Utility Board (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); Peabody Energy (\$5,000), People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); SBC (\$5,000); Verizon (\$5,000); Fiscal Year 2007, \$73,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Lon Carlson, Fiscal Year 2006, \$13,360.

Corporate Funding for *Institute for Regulatory Policy Studies*, AARP (\$1,500), Alliance Pipeline (\$2,500), Ameren (\$5,000); Citizens Utility Board (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); DTE Energy (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); Peabody Energy (\$2,500), People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); SBC (\$5,000); Verizon (\$5,000); Fiscal Year 2006, \$71,500 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Fiscal Year 2005, \$12,916.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); Citizens Utility Board (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); SBC (\$2,500); Verizon (\$2,500); Fiscal Year 2005, \$60,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Fiscal Year 2004, \$17,515.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); Fiscal Year 2004, \$45,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Fiscal Year 2003, \$8,300.

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Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$2,500); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Fiscal Year 2003, \$32,500 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Calendar Year 2002, \$15,700.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$2,500); AT&T (\$5,000); Commonwealth Edison (\$2,500); Illinois Power (\$2,500); MidAmerican Energy (\$2,500); NICOR Energy (\$2,500); People Gas Light and Coke (\$2,500); Calendar Year 2002, \$17,500 total.

Corporate Funding for *International Communications Forecasting Conference*, National Economic Research Associates (\$10,000); Taylor Nelson Sofres Telecoms (\$10,000); Calendar Year 2002, \$20,000 total

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 2001, \$35,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Calendar Year 2001, \$19,400.

Corporate Funding for *International Communications Forecasting Conference*, National Economic Research Associates (\$10,000); Taylor Nelson Sofres Telecoms (\$10,000); SAS Institute (\$10,000); Calendar Year 2001, \$30,000 total.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 2000, \$35,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Calendar Year 2000, \$20,270.

Corporate Funding for *International Communications Forecasting Conference*, National Economic Research Associates (\$10,000); Taylor Nelson Sofres Telecoms (\$10,000); Calendar Year 2000, \$20,000 total.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 1999, \$35,000 total.

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Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Calendar Year 1999, \$10,520.

Corporate Funding for *International Communications Forecasting Conference*, National Economic Research Associates (\$10,000); PNR Associates (\$10,000); Calendar Year 1999, \$20,000 total.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); CILCO (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 1998, \$30,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Calendar Year 1998, \$44,334.

Corporate Funding for *International Communications Forecasting Conference*, National Economic Research Associates (\$10,000); PNR Associates (\$10,000); Calendar Year 1998, \$20,000 total.

Corporate Funding for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, AmerenCIPS (\$5,000); CILCO (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 1997, \$30,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with L. Dean Hiebert, Calendar Year 1997, \$19,717.

Total External Funding: \$2,021,110

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