

David G. Loomis
Illinois State University
Department of Economics
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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

1996-present 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.

2006-2016 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)

2007-2016 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.

2011-present Strategic Economic Research, LLC

President

- Performed economic impact analyses on policy initiatives and energy projects such as wind energy and transmission lines and at the county and state level.
- Provided expert testimony before state legislative bodies, public utility commissions, and county boards.
- Wrote telecommunications policy impact report comparing Illinois to other Midwestern states.

1997-2002 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.

Professional Awards and Memberships

2016 Cross-Disciplinary Team Research Award with Jin Jo and Matt Aldeman – awarded to team for excellence in research

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

33. Jin, J.H., Cross, J., Rose, Z., Daebel, E., Verderber, A., and **Loomis, D. G.** (2016). Financing options and economic impact: distributed generation using solar photovoltaic systems in Normal, Illinois, *AIMS Energy*, 4(3): 504-516.
32. **Loomis, D.G.**, Hayden, J., Noll, S. and Payne, J.E. (2016). Economic Impact of Wind Energy Development in Illinois, *The Journal of Business Valuation and Economic Loss Analysis*, 11(1), 3-23.
31. **Loomis, D.G.**, Jo, J.H., and Aldeman, M.R., (2016). Economic Impact Potential of Solar Photovoltaics in Illinois, *Renewable Energy*, 87, 253-258.
30. Aldeman, M.R., Jo, J.H., and **Loomis, D.G.** (2015). The Technical Potential for Wind Energy in Illinois, *Energy*, 90(1), 1082-1090.
29. Tegen, S., Keyser, D., Flores-Espino, F., Miles, J., Zammit, D. and **Loomis, D.** (2015). Offshore Wind Jobs and Economic Development Impacts in the United States: Four Regional Scenarios, National Renewable Energy Laboratory Technical Report, NREL/TP-5000-61315, February.
28. **Loomis, D. G.** and Bowden, N. S. (2013). Nationwide Database of Electric Rates to Become Available, *Natural Gas & Electricity*, 30 (5), 20-25.

Professional Publications (cont'd)

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.
26. Malm, E., **Loomis, D. G.**, 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.
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.
19. 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.
16. 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.

Professional Publications (cont'd)

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.
13. 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.
11. Swann, C. M., & **Loomis, D. G.** (2005). Competition in local telecommunications – there's more than you think. *Business Economics*, 40, 18-28.
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. *Teletronikk*, 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.
6. 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.
5. 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.

Professional Publications (cont'd)

3. Malm, E. & **Loomis, D. G.** (1999). Active market share: measuring competitiveness in retail energy markets. *Utilities Policy*, 8, 213-221.
2. 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.
1. Loomis, D. G. (1997). Strategic substitutes and strategic complements with interdependent demands. *The Review of Industrial Organization*, 12, 781-791.

Expert Testimony

19. Macon County (Illinois) Environmental, Education, Health and Welfare Committee, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of E.ON Energy, Direct Oral Testimony, August 20, 2015.
18. Illinois Commerce Commission, Case No. 15-0277, Oral Cross-examination Testimony on behalf of Grain Belt Express Clean Line LLC appeared before the Commission on August 19, 2015.
18. Macon County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of E.ON Energy, Direct Oral Testimony, August 11, 2015.
17. Illinois Commerce Commission, Case No. 15-0277, Written Rebuttal Testimony on behalf of Grain Belt Express Clean Line LLC filed August 7, 2015.
16. Kankakee County (Illinois) Planning, Zoning, and Agriculture Committee, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of EDF Renewables, Direct Oral Testimony, July 22, 2015.
15. Kankakee County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of EDF Renewables, Direct Oral Testimony, July 13, 2015.
14. Bureau County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Berkshire Hathaway Energy/Geronimo Energy, Direct Oral Testimony, June 16, 2015.
13. Illinois Commerce Commission, Case No. 15-0277, Written Direct Testimony on behalf of Grain Belt Express Clean Line LLC filed April 10, 2015.

Expert Testimony (cont'd)

12. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, Oral Cross-Examination, December 8-9, 2014.
11. Missouri Public Service Commission, Case No. EA-2014-0207, Oral Cross-examination Testimony on behalf of Grain Belt Express Clean Line LLC appeared before the Commission on November 21, 2014.
10. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, Direct Oral Testimony, November 17-19, 2014.
9. Missouri Public Service Commission, Case No. EA-2014-0207, Written Surrebuttal Testimony on behalf of Grain Belt Express Clean Line LLC, filed October 14, 2014.
8. Missouri Public Service Commission, Case No. EA-2014-0207, Written Direct Testimony on behalf of Grain Belt Express Clean Line LLC, filed March 26, 2014.
7. Illinois Commerce Commission, Case No. 12-0560, Oral Cross-examination Testimony on behalf of Rock Island Clean Line LLC appeared before the Commission on December 11, 2013.
6. Illinois Commerce Commission, Case No. 12-0560, Written Rebuttal Testimony on behalf of Rock Island Clean Line LLC filed August 20, 2013.
5. Boone County (Illinois) Board, Examination of Wind Energy Conversion System Ordinance, Direct Testimony and Cross-Examination, April 23, 2013.
4. Illinois Commerce Commission, Case No. 12-0560, Written Direct Testimony on behalf of Rock Island Clean Line LLC filed October 10, 2012.
3. Whiteside County (Illinois) Board and Whiteside County Planning and Zoning Committee, Examination of Wind Energy Conversion System Ordinance, Direct Testimony and Cross-Examination, on behalf of the Center for Renewable Energy, April 12, 2012.
2. State of Illinois Senate Energy and Environment Committee, Direct Testimony and Cross-Examination, on behalf of the Center for Renewable Energy, October 28, 2010.
1. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of the Center for Renewable Energy, Direct Testimony and Cross-Examination, July 28, 2010.

Selected Presentations

“Energy Storage Economics and RTOs,” presented October 30, 2016 at the Energy Storage Conference at Argonne National Laboratory.

“Wind Energy in Illinois,” on October 6, 2016 at the B/N Daybreak Rotary Club, Bloomington, IL.

“Smart Grid for Schools,” presented August 17, 2016 to the Ameren External Affairs Meeting, Decatur, IL.

“Solar Energy in Illinois,” presented July 28, 2016 at the 3rd Annual K-12 Teachers Clean Energy Workshop, Richland Community College, Decatur, IL

“Wind Energy in Illinois,” presented July 28, 2016 at the 3rd Annual K-12 Teachers Clean Energy Workshop, Richland Community College, Decatur, IL

“Smart Grid for Schools,” presented June 21, 2016 at the ISEIF Grantee and Ameren Meeting, Decatur, IL.

“Costs and Benefits of Renewable Energy,” presented November 4, 2015 at the Osher Lifelong Learning Institute at Bradley, University, Peoria, IL.

“Energy Sector Workforce Issues,” presented September 17, 2015 at the Illinois Workforce Investment Board, Springfield, IL.

“The Past, Present and Future of Wind Energy in Illinois,” presented March 13, 2015 at the Peoria Rotary Club, Peoria, IL.

“Where Are All the Green Jobs?” presented January 28, 2015 at the 2015 Illinois Green Economy Network Sustainability Conference, Normal, IL.

“Teaching Next Generation Energy Concepts with Next Generation Science Standards: Addressing the Critical Need for a More Energy-Literate Workforce,” presented September 30, 2014 at the Mathematics and Science Partnerships Program 2014 Conference in Washington, DC.

“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 May 6, 2013 at WindPower 2013, Chicago, IL.

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

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

Presentations (cont'd)

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

“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.

“Economic Impact of Wind Energy in Illinois,” presented June 6, 2012 at AWEA’s WINDPOWER 2012, Atlanta, GA.

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

“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.

“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.

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

Presentations (cont'd)

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

“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.

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

“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.

“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.

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

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

Presentations (cont'd)

"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.

"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.

"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.

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

"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.

"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.

"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.

Presentations (cont'd)

"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," Proceedings of EPRI's 11th Forecasting Symposium, 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.

"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 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.

Grants

"Energy Learning Exchange - Implementing Nationally Recognized Energy Curriculum and Credentials in Illinois," Northern Illinois University, RSP Award # A17-0098, February, 2017, \$13,000.

"SmartGrid for Schools 2017 and Energy Challenge," with William Hunter, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002 - extended, January 2017, \$350,000.

"Illinois Jobs Project," University of California Berkeley, RSP Award # A16-0148, August, 2016, \$10,000.

"Energy Workforce Ready Through Building Performance Analysis," Illinois Department of Commerce and Economic Opportunity through the Department of Labor, RSP # A16-0139, June, 2016, \$328,000 (grant was de-obligated before completion).

"SmartGrid for Schools 2016 and Smart Appliance Challenge," with William Hunter, Brad Christenson and Jeritt Williams, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002, January 2016, \$450,000.

"SmartGrid for Schools 2015," with William Hunter and Matt Aldeman, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-001, February 2015, \$400,000.

Grants (cont'd)

"Economic Impact of Nuclear Plant Closings: A Response to HR 1146," Illinois Department of Economic Opportunity, RSP Award # 14-025001 amended, January, 2015, \$22,000.

"Partnership with Midwest Renewable Energy Association for Solar Market Pathways" with Missy Nergard and Jin Jo, U.S. Department of Energy Award Number DE-EE0006910, October, 2014, \$109,469 (ISU Award amount).

"Renewable Energy for Schools," with Matt Aldeman and Jin Jo, Illinois Department of Commerce and Economic Opportunity, Award Number 14-025001, June, 2014, \$130,001.

"SmartGrid for Schools 2014," with William Hunter and Matt Aldeman, Illinois Science and Energy Innovation Foundation, RSP # 14B116, March 2014, \$451,701.

"WINDPOWER 2014 Conference Exhibit," Illinois Department of Commerce and Economic Opportunity, RSP #14C167, March, 2014, \$95,000.

"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; amended to \$223,914.

"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.

Grants (cont'd)

"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.

"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.

Grants (cont'd)

"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.

"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.

Grants (cont'd)

"Using Real Presenter to create a virtual tour of GTE's Central Office," with Jack Chizmar, Instructional Technology Literacy Mentoring Project Grant (peer-reviewed), 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: \$7,482,913

External Funding

Corporate Funding for *Institute for Regulatory Policy Studies*, Ameren (\$7,500), Aqua Illinois (\$7,500); Commonwealth Edison (\$7,500); Exelon/ (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2017, \$75,000 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Adrienne Ohler, Fiscal Year 2016, \$19,667.

Corporate Funding for *Energy Learning Exchange*, Calendar Year 2016, \$53,000.

Corporate Funding for *Institute for Regulatory Policy Studies*, Ameren (\$7,500), Aqua Illinois (\$7,500); Commonwealth Edison (\$7,500); Exelon/Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Utilities, Inc. (\$7,500) Fiscal Year 2016, \$82,500 total.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Adrienne Ohler, Fiscal Year 2015, \$15,897.

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); Exelon/Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2015, \$90,000 total.

Corporate Funding for *Energy Learning Exchange*, Calendar Year 2014, \$55,000.

Workshop Surplus for *Institute for Regulatory Policy Studies*, with Adrienne Ohler, Fiscal Year 2014, \$12,381.

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, \$102,000 total.

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

External Funding (cont'd)

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.

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.

External Funding (cont'd)

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.

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

External Funding (cont'd)

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.

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.

External Funding (cont'd)

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.

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.

External Funding (cont'd)

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: \$2,406,565