

John E. Bistline

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RESEARCH INTERESTS	Energy and Environmental Economics, Climate Policy Analysis, Power Systems, Risk Analysis, Technological Change
EDUCATION	Stanford University , Stanford, CA PhD, Management Science and Engineering, 2010–2013 <i>Dissertation:</i> “Essays on Uncertainty Analysis in Energy Modeling: Capacity Planning, R&D Portfolio Management, and Fat-Tailed Uncertainty” <i>Committee:</i> John Weyant (primary adviser), Gerd Infanger, Jim Sweeney, Yinyu Ye, Chris Edwards (defense chair) Stanford University , Stanford, CA MS, Mechanical Engineering, 2008–2010 <i>Depth:</i> Energy Systems Carnegie Mellon University , Pittsburgh, PA BS, Mechanical Engineering and Engineering and Public Policy, 2004–2008
EXPERIENCE	Electric Power Research Institute , Palo Alto, CA <i>Senior Technical Leader, Energy and Environmental Analysis</i> 2017–Present <i>Project Manager and Technical Lead, Energy and Environmental Analysis</i> 2013–2017 Stanford University , Stanford, CA <i>Research Fellow, Steyer-Taylor Center for Energy Policy and Finance</i> 2013–2016 <i>Research Assistant for Prof. John Weyant, Energy Modeling Forum</i> 2010–2013 <i>Research Assistant for Prof. Chris Edwards, Advanced Energy Systems Lab</i> 2008–2010 Electric Power Research Institute , Palo Alto, CA <i>Research Assistant, Energy and Environmental Analysis</i> 2010 Electric Power Research Institute , Washington, DC <i>Research Assistant, Energy Technology Assessment Center</i> 2007 Applied Research Laboratory , State College, PA <i>Research Assistant for Prof. Robert Kunz</i> 2006 Particle Flow and Tribology Laboratory , Pittsburgh, PA <i>Research Assistant for Prof. C. Fred Higgs, III</i> 2005–2007
HONORS AND AWARDS	Chauncey Award, Electric Power Research Institute 2016 Chauncey Award, Electric Power Research Institute 2014 Best Early Career Article, <i>Environmental Research Letters</i> 2014 School of Engineering Fellowship, Stanford 2010–2011 William K. Bowes, Jr. Fellow, Stanford 2008–2011 Bennett Award for Academic Achievement, Carnegie Mellon 2008

Tau Beta Pi Fellow	2008–2009
National Science Foundation Research Fellowship Honorable Mention	2009
CIT Dean’s List, Carnegie Mellon	2004–2008
Undergraduate Teaching Fellow, Carnegie Mellon	2008
Thomas H. Johnson Engineering and Public Policy Fellow, Carnegie Mellon	2007
Institutional Nominee for Morris K. Udall Scholarship	2007
Intel First Year Research Experience Grant	2005
John Nagy, Sr. Memorial Scholarship	2004
John S. Morrison Scholarship	2004

JOURNAL
PUBLICATIONS

- Blanford, G. J., J. H. Merrick, **J. E. Bistline**, and D. T. Young (2018). Simulating Annual Variation in Load, Wind, and Solar by Representative Hour Selection. *The Energy Journal*, forthcoming.
- Bistline, J. E.** and S. K. Rose (2017). Social Cost of Carbon Pricing of Power Sector CO₂: Accounting for Leakage and Other Social Implications from Subnational Policies. *Environmental Research Letters*, 13(1): 014027.
- Bistline, J. E.** and F. de la Chesnaye (2017). Banking on Banking: Does “When” Flexibility Mask the Costs of Stringent Climate Policy? *Climatic Change*, 144(4): 597–610.
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- Bistline, J. E.**, D. M. Blum, C. Rinaldi, G. Shields-Estrada, S. S. Hecker, and M. E. Paté-Cornell (2015). Assessing the Size of North Korea’s Uranium Enrichment Program. *Journal of Science and Global Security*, 23(2): 71–100.
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- Bistline, J. E.** (2014). Energy Technology Expert Elicitations: An Application to Natural Gas Turbine Efficiencies. *Technological Forecasting and Social Change*, 86: 177–187.
- Shearer, C., **J. E. Bistline**, M. Inman, and S. J. Davis (2014). The Effect of Natural Gas Supply on US Renewable Energy and CO₂ Emissions. *Environmental Research Letters*, 9(9): 094008.
- Bistline, J. E.** and J. P. Weyant (2013). Electric Sector Investments under Technological and Policy-Related Uncertainties: A Stochastic Programming Approach. *Climatic Change*, 121(2): 143–160.
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- Hoskins, M. H., R. F. Kunz, **J. E. Bistline**, and C. Dong (2009). Coupled Flow-Structure-Biochemistry Simulations of Dynamic Systems of Blood Cells Using an Adaptive Surface Tracking Method. *Journal of Fluids and Structures*, 25(5): 936–953.

OTHER
PUBLICATIONS

Bistline, J. E., R. James, and A. Sowder (2018). Exploring the Role of Advanced Nuclear in Future Energy Markets: Economic Drivers, Barriers, and Impacts in the U.S. EPRI Report 3002011803.

Cole, W., B. Frew, T. Mai, Y. Sun, **J. E. Bistline**, G. Blanford, D. Young, C. Marcy, C. Namovicz, R. Edelman, B. Meroney, R. Sims, J. Stenhouse, and P. Donohoo-Vallett (2017). Variable Renewable Energy in Long-Term Planning Models: A Multi-Model Perspective. NREL/TP-6A20-70528.

Bistline, J. E., D. Shawhan, G. Blanford, F. de la Chesnaye, A. Krupnick, B. Mao, N. Santen, and R. Zimmerman (2017). Systems Analysis in Electric Power Sector Modeling: Evaluating Model Complexity for Long-Range Planning. EPRI Report 3002011365.

Santen, N., **J. E. Bistline**, G. Blanford, and F. de la Chesnaye (2017). Systems Analysis in Electric Power Sector Modeling: A Review of the Recent Literature and Capabilities of Selected Capacity Planning Tools. EPRI Report 3002011102.

Electric Power Research Institute (2017). Quick Insights: Energy Department Report on Electricity Markets and Reliability. EPRI Report 3002011711.

Bistline, J. E., V. Niemeyer, and D. Young (2017). Understanding Clean Power Plan Choices in Kansas: Options and Uncertainties. EPRI Report 3002009492.

Young, D., G. Blanford, **J. E. Bistline**, S. Rose, F. de la Chesnaye, R. Bedilion, T. Wilson, and S. Wan. US-REGEN Model Documentation. EPRI Report 3002010956.

Young, D., V. Niemeyer, and **J. E. Bistline** (2016). Understanding Clean Power Plan Choices in Michigan: Options and Uncertainties. EPRI Report 3002009036.

Bistline, J. E. (2016). Technical and Economic Challenges of Flexible Operations under Large-Scale Renewable Deployment: Case Studies for Texas and California. EPRI Report 3002008897.

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James, R., S. Hesler, and **J. E. Bistline** (2015). Program on Technology Innovation: Fossil Fleet Transition with Fuel Changes and Large Scale Variable Renewable Integration. EPRI Report 3002006517.

Rose, S., D. Diaz, G. Blanford, **J. E. Bistline**, F. de la Chesnaye, and T. Wilson (2014). Understanding the Social Cost of Carbon: A Technical Assessment. EPRI Report 3002004657.

PAPERS IN
PREPARATION OR
UNDER REVIEW

Bistline, J. E., S. D. Comello, and A. Sahoo. “Managerial Flexibility in Levelized Cost Measures: A Framework for Incorporating Uncertainty in Energy Investment Decisions.”

Bistline, J. E., E. Hodson, C. G. Rossmann, J. Creason, B. Murray, and A. Barron. “Electric Sector Policy, Technological Change, and U.S. Emissions Reductions Goals: Results from the EMF 32 Model Intercomparison Project.”

Creason, J., E. Hodson, C. Rossmann, **J. E. Bistline**, and B. Murray. “Technology and U.S. Power Sector Emissions Reductions Goals: Results of the EMF 32 Modeling Exercise.”

Young, D. and **J. E. Bistline**. “The Costs and Value of Renewable Portfolio Standards in Meeting Decarbonization Goals.”

Mai, T., **J. E. Bistline**, Y. Sun, W. Cole, C. Marcy, C. Namovicz, and D. Young. “A Multi-Model Perspective of the Future of Variable Renewable Energy in the United States.”

Bistline, J. E., N. Santen, and D. Young. “The Economic Geography of Variable Renewable Energy and Impacts of Trade Formulations for Renewable Mandates.”

PROFESSIONAL
AFFILIATIONS

United States Association for Energy Economics, INFORMS

AD-HOC
REVIEWER

Climate Change Economics, Climatic Change, Energy Economics, The Energy Journal, Energy Policy, Energy Research and Social Science, Nature Energy, Proceedings of the National Academy of Sciences

REFERENCES

Available upon request