

## **STEPHEN GROVER**

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M.S., Economics, University of Wisconsin-Madison  
B.A., Economics, Pacific Lutheran University, Tacoma, WA

**Stephen Grover** is a Ph.D. economist who joined ECONorthwest in 2000 as a senior economist and project manager. He currently heads ECONorthwest's energy practice area. In addition to work at ECONorthwest, Dr. Grover has also worked as an adjunct professor at Portland State University where he teaches courses in econometric forecasting and energy economics. Dr. Grover's expertise is in discrete choice modeling and estimating models of consumer behavior using revealed and stated preference techniques. He has utilized these skills in a wide range of applications, including litigation support, transportation, energy, and environmental projects. Most recently, Grover has applied these techniques to research environmental and non-market valuation issues and to estimate consumer willingness to pay for energy efficiency. He has managed and worked on projects for the U.S. Department of Energy, U.S. Environmental Protection Agency, National Renewable Energy Lab, as well as for some of the largest electric utilities in the country.

### **Litigation Experience**

- As expert, estimated lost compensation in a wrongful termination case involving a delivery truck driver. Miller Nash (Defendant, trial scheduled for January 2005).
- Submitted testimony on the potential economic impacts of the Kittitas Valley wind project (Washington EFSEC, July 2004).
- As expert, estimated damages and wrote expert report on lost compensation in a wrongful termination case in the insurance industry. Miller Nash (Defendant, 2003).
- As an expert witness, estimated damages and wrote expert report on lost compensation in a promotion discrimination case involving a corrections officer. Roxanne Farra (Plaintiff, 2003).
- As an expert witness, estimated damages and wrote expert report on the value of lost household services in a wrongful death case. Davis Adams & Day (Plaintiff, 2003).
- As an expert witness, estimated damages and wrote expert report on lost compensation in a promotion discrimination case involving a police officer. Walters Romm Chanti & Dickens (Plaintiff, 2003).
- As an expert witness, estimated damages and wrote expert report on lost compensation in a wrongful termination case involving a truck driver. Miller Nash (Defendant, 2003).
- Testified on damages as expert witness in wrongful termination case in the insurance industry. Miller Nash (Defendant, 2003).
- As an expert witness, estimated damages and wrote expert report on lost compensation in a wrongful termination case. Miller Nash (Defendant, 2002).
- Developed wage prediction model as expert witness in a wage discrimination case. Miller Nash (Defendant, 2002).

- Estimated damages due to lost compensation as part of a wrongful termination case. Miller Nash (Defendant, 2001).
- Assisted in damages estimation in a wrongful termination case. Newcombe, Sabin, Schwartz & Landsverk (Defendant, 2001).
- Estimated damages due to lost compensation as part of a wrongful termination case. Miller Nash (Defendant, 2000).

## **Project Experience**

- For the State of Washington, developed a guidebook to help rural counties to estimate the potential economic impacts of small wind projects.
- For Vestas Wind, estimated the economic benefits to Oregon of having a wind power manufacturing plant located within the state.
- For the Northwest Energy Efficiency Alliance, developing guidelines for hospitals considering outsourcing energy management for their facilities.
- For a private client, developing a plan to analyze the potential impacts of medical malpractice reform initiatives.
- For the National Renewable Energy Laboratory (NREL), conducting a market assessment for commercial solar energy technologies.
- For the New York State Energy Research and Development Authority (NYSERDA), developing logic models and program theory for the 41 energy efficiency and renewable energy programs included in the New York Energy Smart program portfolio.
- For Enbridge Consumer Gas in Toronto, conducting an audit of their 2002 DSM program evaluation and providing recommendations on evaluation procedures.
- For the Energy Trust of Oregon, conducting process evaluations of their residential and commercial new construction programs and assessing market areas that new programs should target.
- For the Energy Trust of Oregon, estimated economic impacts of program spending and energy savings attributed to their energy efficiency and renewable energy programs.
- For a local economic development group, analyzed the potential economic benefits and effects on property values of a large wind energy farm in Kittitas County, WA.
- For NREL and the DOE, wrote report documenting the effects of Federal R&D in energy efficient technologies in the buildings sector over the last 25 years.
- For NREL, assessed status of solar energy research and provided recommendations for future R&D for several solar technologies.
- Measurement and evaluation of the market transformation effects of an Energy Star residential lighting program for the Northwest Energy Efficiency Alliance.
- For a private client, analyzed potential costs associated with public-private ownership of Portland General Electric.
- Verification analysis of DSM program savings estimates for California utilities for the California PUC.
- On going economic analysis support for researching clean energy issues for the National Renewable Energy Laboratory.
- Analysis of propane markets for Northwest Natural Gas.
- Updated the AASHTO “Redbook” manual for conducting transportation-related benefit-cost analysis for state transportation agencies.

- Fiscal impact analysis of a proposed annexation for the City of Tualatin.
- Developing an environmental cost accounting system for the Washington DOT.
- Benefit-cost analysis of proposed Traffic Relief Option highway projects for Portland Metro.
- Developed guidebook for transit agencies to measure the benefits and disbenefits of providing rail and bus transit.
- Analysis of growth in drug and health care spending under the Oregon Health Plan.
- Consumer analysis of clothes washer demand for the U.S. Department of Energy.
- Discrete choice modeling for net-to-gross analysis for Pacific Gas and Electric commercial DSM programs.
- Managed residential DSM program evaluations for Florida Power and Light.
- Market penetration model development using conjoint analysis data for residential DSM programs for Florida Power and Light.
- Analysis of lost recreational use value due to acid rain in the Northeast United States for the U.S. Environmental Protection Agency.

## **Presentations**

“Commercial Customers and Market Drivers to Early Solar Adoptions”, presented at the American Solar Energy Society Conference, Portland, OR, July 2004.

“Economic Development Benefits of Wind Power: A Guide for Communities for Estimating the Benefits of Wind Projects”, presented at the Community Wind Energy Conference, Minneapolis, MN, June 2004.

“Economic Impacts of Wind Power in Kittitas County, WA”, presented at the Harvesting Clean Energy Conference, Portland, OR, January 2004.

“A Comparison of Rebates and Non-Rebate Promotions in a Residential Lighting Program”, presented at the International Energy Program Evaluation Conference, Seattle, WA, August 2003.

“The Economic Impacts of Wind Energy in Kittitas County, WA” presented at the NREL Energy Analysis seminar, Washington, DC, December 2002.

“Saturation, Penetration, Transformation: How Do You Know When a Market Has Changed?” presented at the ACEEE 2002 Summer Study on Energy Efficiency in Buildings Conference, August 2002.

“Shedding Light on Energy Efficient Lighting Markets in the Pacific Northwest”, presented at the 2002 Pacific Northwest Regional Economics Conference, Portland, OR, May 2002.

“Non-Energy Benefits: Lessons from Non-Energy Worlds”, presented at the 2001 Association of Energy Service Providers (AESP) Conference, Jacksonville, Florida, December 2002.

“Shedding Light on Energy Star Markets: Evaluation Lessons Learned from a Retail Lighting Market Transformation Program”, presented at the 2001 International Energy Program Evaluation Conference, Salt Lake City, Utah, August 2001.

“Pay Now, Save Later: Using Conjoint Analysis to Estimate Consumers’ Willingness to Pay for Energy Efficiency,” presented at the ACEEE 2000 Summer Study on Energy Efficiency in Buildings, August 2000.

“High Efficiency Clothes Washers: Whiter Whites with Less Energy?“, presented at the International Energy Program Evaluation conference, Denver, CO, 1999.

“Market Penetration: How to Predict the Future,” presented at the ACEEE 1998 Summer Study on Energy Efficiency in Buildings, August 1998.

“A Nested Logit Model of Congestion and Recreation Demand,” presented at the *Western Economics Conference*, San Diego, CA, 1995.

## Publications

“Reaping the Wind: The Economic Impacts of Spending on Renewable Energy and Energy Efficiency Programs”, with Alec Josephson, Ben Bronfman, and Fred Gordon, *Proceedings of the ACEEE 2004 Summer Study on Energy Efficiency in Buildings*, Washington DC, ACEEE, 2004.

“Consumer Preferences for CFLs Over Time: Where Are We Going?“, with Peter Graven and Emily French, *Proceedings of the ACEEE 2004 Summer Study on Energy Efficiency in Buildings*, Washington DC, ACEEE, 2004.

“Commercial Customers and Market Drivers to Early Solar Adoptions”, with Robert Margolis. *Proceedings of 33<sup>rd</sup> ASES Annual Conference*, Boulder, CO, 2004.

“A Comparison of Rebates and Non-Rebate Promotions in a Residential Lighting Program”, with Charisa Flaherty, *Proceedings of the 2003 IEPE Conference*, IEPE, Oregon, WI, 2003.

“The Economic Impacts of a Proposed Wind Power Plant in Kittitas County, Washington State, USA.” *Wind Energy Engineering*, Volume 26, No. 5 (2002).

“Saturation, Penetration, Transformation: How Do You Know When a Market Has Changed?“, with David Cohan and My Ton, *Proceedings of the ACEEE 2002 Summer Study on Energy Efficiency in Buildings*, Washington DC, ACEEE.

“Shedding Light on Energy Star Markets: Evaluation Lessons Learned from a Retail Lighting Market Transformation Program”, with David Cohan, *Proceedings of the 2001 IEPE Conference*, IEPE, Oregon, WI, 2001.

“Pay Now, Save Later: Using Conjoint Analysis to Estimate Consumers’ Willingness to Pay for Energy Efficiency”, with Bill Babiuch, *Proceedings of the ACEEE 2000 Summer Study on Energy Efficiency in Buildings*, Washington DC, ACEEE, 2000.

“High Efficiency Clothes Washers: Whiter Whites, Less Energy?“, with Christie Torok and Bill Babiuch, in *Proceedings of the 1999 International Energy Program Evaluation Conference*, Denver, CO, 1999.

“Market Penetration: How to Predict the Future,” with Ibbie Ikenze-Bates, in *Proceedings of the ACEEE 1998 Summer Study on Energy Efficiency in Buildings*, Washington DC, ACEEE, 1998.

“Estimate of Federal Relighting Potential and Demand for Efficient Lighting Products,” with S.A. Shankle, J.A. Dirks, D.B. Elliott, and E.E. Richman, prepared for the U.S. Department of Energy Federal Energy Management program by Battelle Pacific Northwest Laboratory (PNL), November, 1993.

