

## MARC H. VATTER

### EDUCATION

**Ph.D. in Economics**, Brown University, Providence, RI, 2007

**M.A. in Economics**, Brown University, Providence, RI, 1999

**B.A. in Economics** with departmental honors, University of Oregon, Eugene, OR, 1986

### CONSULTING EXPERIENCE

**The Economic Utility Group**, February 2021 - June 2021, July 2022 - present

- Forecasted electric vehicle and non-EV electrification load for Hitachi Energy USA

**Hitachi Energy USA**, June 2021 - June 2022

- Analysis, modeling, forecasting, and reporting on wholesale power markets, especially in Mexico, using PROMOD® (a production cost model)

**Elevation Direct Corporation**, Las Vegas, NV, July 2015 - January 2021

- Jointly sponsored testimony before the Rhode Island PUC on the employment impacts of Clear River Energy Center (CREC) for the Rhode Island Building and Construction Trades Council; individually sponsored rebuttal testimony on the need for CREC
- Used Aurora® (a capacity expansion and production cost model) to evaluate potential purchase of Termoelectrica de Mexicali, a combined cycle natural gas-fired generator
- Used Aurora to forecast wholesale electric prices in Michigan and sponsored testimony on behalf of Michigan Public Service Commission staff in a case regarding a purchased power agreement for the output of the Palisades nuclear plant
- Work in restructured wholesale power market in Mexico
  - Provided forecasts of gross state product, loads, and fuel, energy, congestion, loss, ancillary service, and capacity prices, as well as prices of clean energy certificates and social costs of emissions in evaluations of pumped storage, combined-cycle gas, internal combustion, and wind and solar facilities; co-authored market studies done using Aurora, Plexos, and Encompass (capacity expansion and production cost models)
  - Assembled Mexican database and used Aurora to model expansion and operation of power grid for several independent generators
  - Co-authored a report on the economics of introducing liquefied natural gas to southern Baja California
  - Estimated a weighted average cost of capital to Comisión Federal de Electricidad (CFE)
  - Trained employees of CFE in load forecasting
  - Estimated Herfindahl-Hirschman indices of market concentration following breakup of CFE under Mexican energy reform

**Economic Insight**, Portland, OR, January 2010 - March 2013

- Used Aurora to model electric resource planning in the Pacific Northwest
- Used Aurora to estimate trade benefits of Entergy and South Mississippi Electric Power Association joining regional transmission organizations, sponsored testimony before the Mississippi Public Service Commission (MPSC)
- Assessed application to install pollution controls on a coal plant; jointly testified with Sam Van Vactor before the MPSC
- Estimated dollars of spending per employee by generating technology
- Analyzed issues regarding pricing and royalties in geothermal and natural gas leases in California and Texas;
- Analyzed pricing and alleged use of market power in California power crisis
- Estimated lost earnings in a wrongful death lawsuit and testified to report
- **Editor** of scholarly research written by non-native speakers of English (intermittent)

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### CONSULTING EXPERIENCE (CONTINUED)

**Assistant consulting economist to personal injury and wrongful death litigants**, Allan M. Feldman, Providence, RI, 2002-2003

- Worklife evaluation for litigation related to personal injury or wrongful death

**Research Associate**, Synapse Energy Economics, Cambridge, MA, July 1998 - February 1999

- Evaluated forecasts of electricity prices submitted in “stranded-cost” claim by four Maryland utilities

**Associate Economist**, Economic Insight, Portland, OR, May 1988 - September 1988

- Surveyed forecasts of electricity prices and estimates of demand elasticities related to litigation over Washington Public Power Supply System bond defaults

**Technical Assistant**, ECO Northwest, Eugene, OR, July 1986 - August 1987

- Worklife evaluation for litigation related to personal injury and wrongful death; wrote company training manual on the subject

### RESEARCH

Vatter, M. (2022). Pricing global warming as a mortal threat. United States Association for Energy Economics (USAEE) Working Paper No. 21-491, <http://ssrn.com/abstract=3821603>, and IAEE Conference Proceedings, online, June 7-9, 2021, <https://www.iaee.org/proceedings/article/17059>

Vatter, M., Van Vactor, S., and Coburn, T. (2022). Price responsiveness of shale oil: a Bakken case study. *Natural Resources Research*, 31:1, <https://doi.org/10.1007/s11053-021-09972-9>, and IAEE Conference Proceedings, Montreal, May 29-Jun 1, 2019, <https://www.iaee.org/proceedings/article/16313>

Vatter, M. (2020). Stratified zoning in central cities. *Journal of Housing Economics*, 50, <https://doi.org/10.1016/j.jhe.2020.101716>

Vatter, M. (2019). OPEC’s risk premia and volatility in oil prices. *International Advances in Economic Research*, 25:2, DOI: [10.1007/s11294-019-09734-7](https://doi.org/10.1007/s11294-019-09734-7)

Vatter, M., Suurkask, D. (2018). The impact of trade with the United States on electric loads in Mexico. *Heliyon*, 4:8, <https://doi.org/10.1016/j.heliyon.2018.e00717>, and *IAEE Energy Forum*, 2<sup>nd</sup> quarter 2017, <https://www.iaee.org/en/publications/newsletterdl.aspx?id=406>

Vatter, M. (2017). OPEC’s kinked demand curve. *Energy Economics*, 63, <https://doi.org/10.1016/j.eneco.2017.02.010>

Vatter, M. (2017). Stockpiling to contain OPEC. USAEE Working Paper No. 17-136, <http://ssrn.com/abstract=912311>, and USAEE Conference Proceedings, New Orleans, December, 2008, <https://www.iaee.org/proceedings/article/17512>

Vatter, M. (2017). Social discounting with diminishing returns on investment, <http://ssrn.com/abstract=1078502>

Vatter, M., Barney, F. (2016). Macroeconomic risk and residential rate design. USAEE Working Paper No. 15-208, <http://ssrn.com/abstract=2596258>

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### RESEARCH (CONTINUED)

Vatter, M. (2008). OPEC's demand curve, <http://ssrn.com/abstract=1127642>, reviewed at <http://knowledgeproblem.com/2008/05/14/>

**Research Assistant** to Allan M. Feldman, valuation of individual earning capacity, Brown University, 2000

**Research Assistant** to J. Vernon Henderson, industrial location in Indonesia, Brown University, Summer 1999

**Peer Reviewer** for *Land Economics*: effects of endowments of petroleum resources on corruption, 2008; hedging in coal contracts under the acid rain program, 2010-11; suburban agriculture as an amenity, 2012; prorationing versus unitization in the U.S. petroleum industry in the 20<sup>th</sup> century, 2013

### STREAMING MEDIA

International Atlantic Economic Society video: Nice world economy you have there; be a shame if something should happen to it, temporarily available at <https://www.iaes.org/>, accessed June 15, 2022

IAEE webinar: Is another oil price shock possible, and would it matter? January 11, 2021, [https://www.iaee.org/en/webinars/webinar\\_vatter.aspx](https://www.iaee.org/en/webinars/webinar_vatter.aspx)

USAEE podcast: OPEC as a destabilizing influence, July 21, 2020, <https://www.usaee.org/podcasts.aspx>

Video: **Discussing transmission costs with New Hampshire Senate Energy and Natural Resources Chair Kevin Avar**, [https://www.youtube.com/watch?v=QRkLdLplz9Y&feature=youtu.be&fbclid=IwAR2Euva286vNRa5Lit0RstjHwtPuV5a\\_t439Cml4Z8S2WHYptXNdJ40vkZs](https://www.youtube.com/watch?v=QRkLdLplz9Y&feature=youtu.be&fbclid=IwAR2Euva286vNRa5Lit0RstjHwtPuV5a_t439Cml4Z8S2WHYptXNdJ40vkZs)

Video: **Discussing manufacturing, net metering rate design, and transmission costs on *Perspectives* with David Schoneman**, <https://youtu.be/m9YRY3U-DzM>

### TEACHING EXPERIENCE

**Adjunct Professor of Business and Security Studies**, Rivier University, Nashua, NH, January 2020 - present. Average student rating: 85%

- Teach economic analysis to graduate students

**Visiting Assistant Professor of Economics**, Universidad del Pacifico, Jesús María, Lima, Peru, September 2014. Average student rating: 85%

- Taught topical graduate course in energy economics

**Visiting Assistant Professor of Economics**, Pacific University, Forest Grove, OR, August 2008 - May 2009. Average student rating: 63%

• Taught principles of microeconomics, environmental economics, and international trade  
**Lecturer in Economics**, Eastern Connecticut State University, Willimantic, CT, August 2005 - May 2006. Average student rating: 70%

- Taught principles of microeconomics

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### TEACHING EXPERIENCE (CONTINUED)

**Teaching Assistant** to Harl Ryder and others, Brown University, Providence, RI, September 1999 - May 2002. Average student rating: 59%

- Teaching assistant for principles of micro- and macroeconomics

**Teacher, English as a Second Language**, Changsha Normal University of Water Resources and Electric Power, Changsha, Hunan, PRC, August 1987 - January 1988; Brown University, Providence, RI, Summer 2001

### GOVERNMENTAL EXPERIENCE

**Associate Economist**, New York Department of Public Service, Albany, NY, August 2006 - December 2007

**Industry Economist**, Bonneville Power Administration, Portland, OR, May 1994 - June 1997

- Authored and testified to marginal cost analysis in 1996 rate case before FERC
  - Helped prepare inputs to and interpreted and applied results of Power Marketing Decision Analysis Model (PMDAM) to rate design and to planning and evaluation of resources
  - Prepared and conducted public meetings on analysis and its implications for rate design
  - Fielded and incorporated comments from a variety of participants
  - Authored rate case study, documentation, and testimony

**Public Utilities Specialist**, Bonneville Power Administration, Portland, OR, September 1988 - May 1994

- Research on marginal costs of generating and marketing hydropower on the West Coast
- Prepared workshop briefing material, rate case studies, and documentation supporting marginal cost analysis and other rate-related issues as assigned
- Evaluated contracts for disposition of wholesale power

### AWARDS

**Twelve monetary awards** for job performance at Bonneville Power Administration

**Award for best undergraduate research** project in economics at University of Oregon; examined deregulation of U.S. airline industry

### OTHER ACTIVITIES

**Monitored** the House Science, Technology, and Energy Committee in Concord, NH for the Northeast Energy and Commerce Association

**Founded and managed** "Micro Lunch" seminar, Brown University, 2001-2002

**Role of expert witness** in Lewis & Clark Law School's mock personal-injury litigation, 1996

**Peer Advisor**, Department of Economics, University of Oregon, 1984-1986

### MEMBERSHIPS

The Economic Utility Group; International and United States Associations for Energy Economics; American Economic Association; Energy Bar Association; Northeast Energy and Commerce Association; New Hampshire Business and Industry Association (lapsed)

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### TESTIMONIALS

"We asked Marc to provide us with a forecast of future locational marginal prices under two different scenarios, which he managed very well. He provided us with testimony that was on point and met our needs." Lauren Donofrio, Assistant Attorney General, Public Service Division, State of Michigan

"Marc Vatter provided joint testimony with Sam Van Vactor on behalf of Staff in 2010 regarding Mississippi Power's application to install pollution controls on the Victor J. Daniel coal-fired generator. He brought to light critical issues regarding uncertainty over natural gas prices that bore on the decision to install scrubbers. We hired the two again in 2012 in a proceeding on integrating Entergy's transmission assets into a regional transmission organization. Marc added significant detail representing the state of Mississippi to a production cost and capacity expansion model that he used to quantify the effects of integration. A number of consultants engaged in similar efforts, and Marc's analysis was of superior quality." Dr. Christopher Garbacz, Director, Economics and Planning Division, Mississippi Public Utilities Staff