

SAMUEL A. VAN VACTOR

SUMMARY



Sam Van Vactor is an energy economist who has analyzed oil, natural gas, and electricity issues since the energy shocks of the 1970s.

Dr. Van Vactor has led a firm of consulting economists specializing in energy and natural resource issues for over three decades. He has advised many public and private organizations on economic and energy matters, including the American Petroleum Institute, the U.S. Department of Justice, the Bonneville Power Administration, the California Power Exchange, Pacific Gas & Electric Corporation, Sempra, the Western Interstate Energy Board, Sasol, Tokyo Electric Power Company, the Mitsubishi Research Institute, Tokyo Gas, Gaz de France, Gas Natural, Chevron, Exxon-Mobil, BP, the State of Alaska, and the Government of India. He has appeared as an expert witness in international arbitration, tax hearings, civil disputes, antitrust cases, and regulatory proceedings before the Federal Energy Regulatory Commission (FERC) and a variety of State Public Utility Commissions on natural gas and electricity issues. Dr. Van Vactor is the author of *An Introduction to the Global Oil & Gas Business*, from PennWell Publications.

Before his present activity, Dr. Van Vactor was an officer on destroyers in the U.S. Navy, an economist at the U.S. Treasury, a senior economist at the International Energy Agency of the OECD. He also taught energy economics and/or lectured on energy and economics subjects at the University of Tulsa, University of Oregon, Portland State University, University of Maryland (European Division), Cambridge University, and Columbia University.

Dr. Van Vactor has advised the State of Alaska (DOR) on oil price forecasting and assisted in long-term energy planning. He has worked for the North Slope oil and gas producers. He has appeared as an expert on natural gas and electricity pricing at FERC on multiple occasions regarding electricity pricing. Recently he appeared at FERC for Conoco-Philips on TAPS pipeline tariffs. In 1996 he founded the *Energy Market Report*, which helped establish the paradigm for bilateral electricity trading. It was subsequently sold to Argus Media.

Ph.D., **Cambridge University, Darwin College**, U.K.
Research, **London School of Economics**, U.K.
M.A., Economics, **University of Washington**, U.S.A.
B.S., Economics, **University of Oregon**, U.S.A.

EXPERIENCE

President of **Economic Insight, Inc. (EII)**, and Adjunct Professor. His Energy Economics and Policy courses investigate each of the energy industries - oil, natural gas, and electricity and studies the transformation of their markets. Dr. Van Vactor also served as an associate of Dr. Arlon R. Tussing and Vice President of his consulting firm during the deregulation of the North American natural gas industry.

EII provides consulting services on the petroleum, natural gas, and electricity industries. The firm directed a variety of strategic studies for energy companies and government agencies. These studies have forecasted market developments, analyzed regulatory changes, critiqued public policies, evaluated market and pricing structures, etc. Dr. Van Vactor has testified on issues related to anti-trust violations, commodity valuation, contract interpretation, utility regulation, energy transmission, and damage calculations. He has taught energy policy and energy economics at the University of Tulsa and University of Oregon. He has conducted research and given lectures at the University of Cambridge (Scott Polar Research Institute, the Electricity Policy Research Group, and the Judge Institute for Management Studies). He has given guest lectures at the University of Western Australia, Columbia University, and Victoria University of New Zealand.

1979-80, Research Associate at **Portland State University**. During this period, he presented two courses in energy economics and managed several federal grants related to energy and economic issues in the Pacific Northwest.

1978-79, Director of Planning, **Oregon Department of Energy**. Dr. Van Vactor managed a group of six professionals evaluating energy policy options and staffed the State's Energy Facility Siting Council.

1975-78, Senior Economist at the **International Energy Agency (IEA)** of the **Organization for Economic Cooperation and Development (OECD)**, Paris, France. He helped design and implement the IEA's country studies program, which analyzed energy policies of oil-consuming nations.

1973-75, International Economist, **U.S. Treasury Department**, Washington, D.C. Dr. Van Vactor was a policy analyst for the Secretary and advised him on international economic issues, including currency devaluation, oil pricing and energy demand. He assisted in the development of a series of domestic energy and economic policy documents.

1972-73, Economics Instructor, University College, **University of Maryland, European Division**. He taught courses in the Principles of Economics at the U.S. Embassy in London and at nearby military bases to U.S. servicemen and civilian employees.

1966-69, Naval Officer **U.S. Navy**. He was communications officer on destroyers, serving in both the Atlantic and Pacific Oceans.

MAJOR PROJECTS AND TESTIMONY

1984, consulting services to Texaco on its merger with Getty Oil Company.

1987 testimony for Unocal in federal court on the gasoline market.

1988-1991, expert reports for ARCO, BP, and Exxon concerning valuation of royalty crude oil in Alaska.

1993, testimony for ARCO before an IRS panel on the value of foreign crude oils.

February 1996, report for Sasol on the (de) regulation of the natural gas industry in Southern Africa.

March 1997, testimony for Exxon at Alaska tax hearings concerning the value of imported foreign crude oil as compared to Alaska North Slope oil.

September 1997 through 2000, testimonies submitted to FERC on behalf of the California Power Exchange, concerning projected trading volume and costs as well as strategic analysis in new product design and market structure.

1998-99 Various reports, for Texaco, ARCO, and Exxon concerning the Mineral Management Service's valuation of royalty crude oils.

January 2000, report for the American Petroleum Institute on the valuation of royalty crude oil in the U.S.

July 2000, prepared testimony for Exxon on West Coast petroleum data and crude oil pricing in City of Long Beach v. Exxon et al.

September 2000, testimony on behalf of Robert Barman in Barman v. Unocal in federal court, Portland, Oregon.

January 2001, report and presentations for the Mitsubishi Research Institute on North American natural gas markets and the California energy crisis.

June 2001, report and damage calculations for the California Power Exchange, concerning the seizure of "block-forward" supply contracts by the State of California.

September 2001, reports and testimony for the "Transactions Finality Group" at FERC hearings on refunds in the Pacific Northwest. The testimony explained and analyzed electricity market fundamentals in the West.

January 2002, prepared testimony on California natural gas pricing for Sempra in SoCal Gas v. Exxon Popco.

March 2002, expert report and damage study for Techint on the value of Nile Blend (Sudanese) crude oil for international arbitration in Techint v. China National Petroleum Corporation, Petronas, Talisman, and Sudapet.

June 2002, study of natural gas pricing in the Pacific Northwest for the Bonneville Power Administration (BPA).

September 2002, declaration for Coral Power, LLC (Shell Oil) and Williams Pipeline Company on the compilation and use of natural gas price indices.

October 2002, declaration for Coral Power, on California's long-term purchase contracts for power, followed by testimony at FERC hearings, December 2002. The declaration and testimony analyzed the economics of California's power purchase contract with Coral Power.

November 2002 report for Nomura Securities on the restructuring of the Japan National Oil Company (JNOC).

December 2002, report for Conoco and BP on the structure of the de-regulated natural gas market and associated obligations following the bankruptcy of Bethlehem Steel Corporation.

September 2003, testimony concerning gasoline marketing on behalf of Robert Barman in Barman v. Unocal in federal court, Portland, Oregon.

January 2004, expert report on behalf of Transasiatic Oil (TAO) concerning ICC arbitration between TAO and the National Iranian Oil Company (NIOC) on the pricing of international crude oil cargos.

June 2004, report and testimony on behalf of Portland General Electric, concerning the cost of acquiring new electricity supplies in the Pacific Northwest.

November 2004, second expert report on behalf of TAO concerning ICC arbitration on the pricing of international crude oil cargos.

February 2005, expert reports and testimony in Geneva on behalf of Gaz de France (GdF) concerning ICC arbitration between GdF and ENI over North Sea gas production and pricing obligations.

June 2005, expert report on behalf of Gallo, regarding its antitrust dispute with EnCana over the pricing of natural gas.

July 2005, report for the Government of India on the valuation of the Dabhol Power Company sponsored by Enron, GE, and Bechtel in Maharashtra Province, India.

August 2005, third expert report on behalf of TAO concerning ICC arbitration between TAO and NIOC on the pricing of international crude oil cargos.

September 2005, report for the U.S. Department of Justice concerning Gas Natural, SDG. S.A., v. USA. Analysis of Trinidad & Tobago gas contracting and LNG marketing in Europe and U.S.

January 2006, expert report for ECCO concerning the impact on the petroleum product market of the fire at the Valero California refinery.

January 2006, report on the economics of pumped storage for the Elsinore Valley Municipal Water District (EVMWD).

May 2006, testimony for TAO before an ICC arbitration panel in Zurich, Switzerland on oil pricing.

June 2006, presentation and briefing on the oil industry for the U.S. Department of Energy's energy emergency exercise "Dark Mountain" for Western state energy officials.

October 2006, expert report and deposition testimony for BPA in a dispute with Southern California Edison (SCE) concerning electricity pricing in California.

February 2007, a second report for EVMWD on the economics of pumped storage and regulatory options.

June 2007, expert report and testimony for Gas Natural regarding its purchase contract with Atlantic LNG.

May 2008, deposition on behalf of LADWP, SMUD, Regents, et al on antitrust issues in the California gas market.

February 2009, report for the Energy Information Administration on the status of restructured electricity markets in the U.S.

May 2009, report and deposition on behalf of Gallo regarding antitrust issues and gas prices in the California market.

October 2009, reports and testimony before the Mississippi Public Service Commission, regarding the proposed construction of a coal gas fired generation facility in Mississippi.

September 2010, report on pricing and royalties in the Barnett gas field for the Dallas Fort Worth Airport.

December 2010, report on comparative economics of electricity storage for Elsinore Valley Municipal Water District (EVMWD).

January 2011, expert report and testimony before the Mississippi Public Service Commission, regarding the risks and costs of installing emission control equipment, including a flue gas-desulfurization unit.

October 2011, expert report for BPA on bidding and anomalous pricing in the California power market, set for hearings at FERC, April 2012.

November 2011 and May 2012, expert reports for the Dallas Fort Worth Airport on pricing of royalty natural gas production.

February 2012, testimony for the Mississippi Public Service Commission concerning the purchase of a natural gas combined cycle plant in Jackson County Mississippi.

May 2012, expert report for the Mississippi Public Service Commission concerning Entergy's proposal to join the Midwest Independent System Operator.

July 2012, testimony for BPA at FERC administrative hearings on electricity markets and power pricing.

October 2012, presentation to the Alaska Department of Revenue annual conference on forecasting oil prices.

April 2013, report for Columbia River Crossing on drill rigs destined for Alaska North Slope oil development.

October 2013, follow up presentation to the Alaska Department of Revenue annual conference on forecasting oil prices.

February 2014, testimony at FERC for Conoco-Phillips on the Trans-Alaska Pipeline System (TAPS) tariff quality bank.

October 2014, research for and presentation to the Alaska Department of Revenue annual conference on forecasting oil prices.

January 2016, deposition on behalf of the plaintiffs in Melissa D. Duflock, Trustee v. Chevron, CV130147.

February 2018, completion of expert reports and settlement analysis for the Pend Oreille PUD on the default of their largest industrial customer.

September 2018, report on royalty volumes and pricing concerning allotment and tribal oil and gas leases in North Dakota.

Member of the natural gas advisory panel to the Pacific Northwest Power and Conservation Council.

November 2019, deposition on behalf of the plaintiffs in Melissa D. Duflock, Trustee v. Chevron, CV130147.

August 2021, report for Direct Energy Business Marketing, LLC. on negative gas and electricity pricing.

AWARDS

2017 Association for Energy Economics, Senior Fellow Award.

SELECTED PUBLICATIONS

Competition in the Oil Industry, (NSF funded project at George Washington University,) January 1976, with William A. Johnson and Richard E. Messick.

"Energy Conservation in the OECD: Progress and Results," *The Journal of Energy and Development*, Spring 1978 and *International Comparisons of Energy Consumption*, Resources for the Future, 1978.

"Mergers and Acquisitions in the Petroleum Industry," published in Papers and Proceedings of the Eighth Annual North American Conference, IAEE, at MIT, November 1986.

"Retrospective on Oil Prices," a paper for delivery at the Western Economic Association Meeting, July 1986 and published in *Contemporary Policy Issues*, July 1987 with Arlon R. Tussing.

"Evolution of Bulk-Power Markets," A paper for delivery at the International Association of Energy Economists, Annual Meeting, Calgary Alberta, 1987.

"Is an Oil Tariff Justified? An American Debate: I. Reality Says No," *The Energy Journal*, July 1988 with Arlon R. Tussing.

"Prospective on World Energy Markets: Real Costs Will Continue to Fall," published in the *OPEC Review*, Summer 1990 with Arlon R. Tussing.

PADD V in Transition: Strategic Evaluation of Oil Industry Prospects in the 1990s, November, 1992 published with Energy Security Analysis, Inc.

"Time to End the Alaska Oil Export Ban," Cato Institute, May 1995.

"Natural Gas Deregulation in South Africa: A Wolf in Sheep's Clothing," 1995-1996 with William A. Johnson, presentation May 1996, Budapest Hungary, Conference of the IAEE.

"Evolution of Wholesale Power Price Structures in the Western Power Market," with Dona K. Lehr and "Commoditisation" in *The Evolving U.S. Power Market*, Risk Publications, June 1997.

"South Korea's Thirst for Gas," with Arlon R. Tussing, *Financial Times Energy Economist*, March 1998.

"Oil and Gas Development on Sakhalin Island," with Arlon R. Tussing, *Financial Times Energy Economist*, July 1998.

“Enhancing Private Investment in the Natural Gas Industry in Asia,” in *Natural Gas in Asia: Facts and Fiction*, for PECC Energy Forum, November 1998 and the *Journal of International Business*, June 2000.

“Electricity Restructuring in North America,” *Financial Times Energy Economist*, December 1998.

“A Comparison of PJM and California Electricity Markets,” *Public Utilities Fortnightly*, July 2000.

“Money, Power and Trade: What You Didn’t Know About the Western Energy Crisis,” with Fred Pickel, May 1, 2001 for the *Public Utilities Fortnightly*.

“Will the Snow Tiger Come Down from the Mountain?” Japan’s Plan to Liberalize Energy Markets,” May 2001, *Oxford Energy Forum*.

“Japan’s Pointless Barricades to Natural Gas Development,” March 2002, translated to Japanese. Japan’s *Piping Journal*.

“How to Make Power Markets Competitive,” with Seth Blumsack, July 2002, *Electricity Pricing in Transition*, developed by the Electric Power Research Institute (EPRI), Kluwer Academic Publishers.

“Held Hostage: Arms and Infrastructure, Oil Development in Sudan and Chad,” paper and presentation at the IAEE annual conference, plenary session, Prague, June 2003.

Review of *Natural Gas in Asia*, for the *Energy Journal*, July 2003.

Flipping the Switch: The Transformation of Energy Markets, Ph.D. thesis at the University of Cambridge, May 2004. Available at www.econ.com.

“Electric Vehicles and Peak Oil Demand,” published by USAEE, 2008.

“Financial Crisis Impacts Energy Industry,” January 2009, *Oil and Gas Financial Journal* and the *2009 International Petroleum Encyclopedia*.

“Fat Tails,” published in Platts’ *Energy Economist*, January 2010.

An Introduction to the Global Oil & Gas Business, PennWell Publications, February 2010. Review from the *Energy Journal*, January 2011: “It is typical at this point to recommend a book to whatever audience is perceived. In this case, every literate person in the world should read the book.”

“The Piecemeal March to Cap and Trade,” Platts’ *Energy Economist*, 2010.

“Energy and the Dodd-Frank Act,” Platts’ *Energy Economist*, August, 2010.

“Implications of Residual Fuel Oil Phase Out” with David Ramberg, for the IAEE 2014 conference in New York City, published in proceedings.

“Comparison of Natural Gas Supply Responses to Seasonality” with Don Winslow, for EAEE 2014 conference; published in proceedings.

‘The Impact of U.S. Shale Oil on the Global Oil Market: Case Study Bakken Shale,’ with Marc Vatter and Tim Coburn for the 2019 IAEE conference in Montreal, Canada.

“Price Responsiveness of Shale Oil: A Bakken Case Study,” and econometric study published in *Natural Resources Research*, January 2022. With Marc Vatter and Tim Coburn.

SELECTED ACTIVITIES AND AFFILIATIONS

Founding member of the International Association for Energy Economics (IAEE) and elected to the Governing Council.

Interviewed on natural gas market issues, February 8, 2001, PBS The News Hour with Jim Lehrer.

Speech for the Industrial Customers of Northwest Utilities annual meeting; November 15, 2001, Portland Oregon.

Speech at the 7th International Conference on Northeast Asian Natural Gas Pipeline, December 3 to 5, Tokyo, Japan.

Speech for Law Seminars International, “Enron’s Collapse and Energy Markets,” Seattle, September 12, 2002.

Seminars on Gas Markets and Pricing, Centre for Management Technology, Singapore, September 2002 and March 2003.

Lectures on Oil and Gas Industry Structure at Ernst & Young, Energy Conference, Judge Institute of Management Studies, University of Cambridge, U.K., September, 2002 and September 2003.

Presentation before the Western Energy Bar Association on the outlook for the natural gas market; February 11, 2005, San Francisco.

Guest on the Ron Insana Show on CNBC, regarding oil prices, June and November 2005.

Lecture at the University of Cambridge on “Storage and renewable energy resources in the new market environment,” Cambridge February 20, 2006.

Seminar at Columbia University on “Transaction costs in the energy industries,” March 7, 2006.

Presentation on European gas purchase contracts at the IAEE European conference in Florence, Italy, June 2007.

Presentation on the prospects for a natural gas cartel at the IAEE Asian conference in Taipei Taiwan, November 2007.

Seminar for the Electricity Policy Research Group at Cambridge University March 3, 2008, comparing oil supply costs and environmental impacts to the new battery technology in cars.

Presentation on “How Oil from the North went South,” before the IAEE annual conference, Istanbul, Turkey, June 20, 2008.

Presentation before the Pacific Northwest Power and Conservation Council, Natural Gas Advisory Committee: “The Short and Long of Oil Prices,” August 15, 2008.

Lectures on “Risk management in the oil industry,” Kula Lumpur, October 2008.

Presentation on “The 2008 Financial Crisis,” before the IAEE Asia conference, Perth, Australia, October 29, 2008.

Presentation “Understanding Relative Energy Prices,” for U.S. Government employees, February 28, 2009, Arlington Virginia.

Chair of plenary session on speculation and oil pricing at the IAEE international conference June 23, 2009.

Presentation, “Understanding the Modern Energy Market Structure” at the *Argus Oil Market Regulation Summit 2009: Striking the Balance*, October 21, Houston, Texas.

Presentation, “The Status of Energy Markets,” at BPA’s Executive Session, November 4, 2009, Portland, Oregon.

Presentation, “Fat Tails and Fat Cats: When to be really scared in the market,” SMi Financial Modeling in the Oil and Gas Industry Conference, London, UK., November 11, 2009.

Presentation, “The Lady or the Tiger? Crude Oil Markets, Overview and Outlook,” Argus US/Canada Asphalt Conference, Houston, Texas, March 25, 2010.

Presentation, “Energy and The Dodd-Frank, Financial Reform Act,” SolArc Conference, Houston Texas, September 15, 2010.

Presentation and Chair, “Asia Natural Gas and LNG Market,” OSEA 2010 Conference, December 3, 2010, Singapore.

June 2013, presentation in Anchorage on Alaska's Infrastructure Development.

Presentation, "Picking up the Pieces, Economic and Oil Market Overview" Argus US/Canada Asphalt Conference, Houston, Texas, March 27, 2014.

Presentation, "Comparison of Natural Gas Supply Responses to Seasonality," 14th IAEE European Conference, Rome, Italy, 31 October, 2014.

Presentation, 'The Impact of U.S. Shale Oil on the Global Oil Market: Case Study Bakken Shale,' for the 2019 IAEE conference in Montreal, Canada.

April 2020, Presentation and Chair for the US Association of Energy Economists Webcast on recent oil and natural gas price movements.

January 2021, Presentation for the International Association of Energy Economists on oil security of supply issues, given the development of electric vehicles.

November 2021, Chair Webinar for the International Association for Energy Economics on Negative Energy Prices.

REFERENCES

Available on request.