Robert McCullough – *Curriculum Vitae*

Principal
McCullough Research, 3816 S.E. Woodstock Place, Portland, OR 97202 USA

Professional Experience

1985-present	Principal, McCullough Research: provide strategic planning assistance, litigation support, and planning for a variety of customers in energy, regulation, and primary metals
1996-present	Adjunct Professor/Visiting Scholar, Economics, Portland State University
1990-1991	Director of Special Projects and Assistant to the Chairman of the Board, Portland General Corporation: conducted special assignments for the Chairman in the areas of power supply, regulation, and strategic planning
1988-1990	Vice President in Portland General Corporation's bulk power marketing utility subsidiary, Portland General Exchange: primary negotiator on the purchase of 550 MW transmission and capacity package from Bonneville Power Administration; primary negotiator of PGX/M, PGC's joint venture to establish a bulk power marketing entity in the Midwest; negotiated power contracts for both supply and sales; coordinated research function
1987-1988	Manager of Financial Analysis, Portland General Corporation: responsible for M&A analysis, restructuring planning, and research support for the financial function; reported directly to the CEO on the establishment of Portland General Exchange; team member of PGC's acquisitions task force; coordinated PGC's strategic planning process; transferred to the officer's merit program as a critical corporate manager
1981-1987	Manager of Regulatory Finance, Portland General Electric: responsible for a broad range of regulatory and planning areas, including preparation and presentation of PGE's financial testimony in rate cases in 1980, 1981, 1982, 1983, 1985, and 1987 before the Oregon Public Utilities Commission; responsible for preparation and presentation of PGE's wholesale rate case with Bonneville Power Administration in 1980, 1981, 1982, 1983, 1985, and 1987; coordinated activities at BPA and FERC on wholesale matters for the InterCompany Pool (the association of investor-owned utilities in the Pacific Northwest) since 1983; created BPA's innovative aluminum tariffs (adopted by BPA in 1986); led PGC activities, reporting

	directly to the CEO and CFO on a number of special activities, including litigation and negotiations concerning WPPSS, the Northwest Regional Planning Council, various electoral initiatives, and the development of specific tariffs for major industrial customers; member of the Washington Governor's Task Force on the Vancouver Smelter (1987) and the Washington Governor's Task Force on WPPSS Refinancing (1985); member of the Oregon Governor's Work Group On Extra-Regional Sales (1983); member of the Advisory Committee to the Northwest Regional Planning Council (1981)
1979-1980	Economist, Rates and Revenues Department, Portland General Electric: responsible for financial and economic testimony in the 1980 general case; coordinated testimony in support of the creation of the DRPA (Domestic and Rural Power Authority) and was a witness in opposition to the creation of the Columbia Public Utility District in state court; member of the Scientific and Advisory Committee to the Northwest Regional Power Planning Council

Economic Consulting

2026	Retained in Herold v. Chevron U.S.A, Inc.; Valero Marketing And Supply Company; PBF Energy Inc.; Martinez Refining Company LLC; Torrance Refining Company LLC; Marathon Petroleum Company LP; and Phillips 66 Company.
2025	Retained by the Green Caucus of the British Columbia Legislative Assembly
2025	Retained by the Apitipi Anicinapek Nation as an expert witness of hydro issues in Ontario
2024	Advised Bellingham Cold Storage on the Washington Cap and Invest program
2024-2025	Retained by Xcel to provide expert testimony in the Marshal Fire litigation
2024-2025	Retained by Illinois Attorney General in market manipulation investigation
2024-2025	Retained by Robins, Geller, Rudman, and Dowd, LLP for testimony before the U.S. Appeals Court

2023-Present	Retained by the Innus of Takuaikan Uashat Mak Mani-Utenam in litigation with the Province of Quebec
2023	Advised Governor Gavin Newsom's staff on gasoline windfall tax issues
2022-2023	Retained by Federal Trade Commission on market manipulation issues.
2022-Present	Retained by the District of Squamish to advise on LNG issues.
2022-2024	Retained by the State of Colorado on market manipulation issues
2021-2024	Retained in litigation regarding ERCOT February Winter Weather Outage Event by Robins Cloud, LLP
2021-2025	Expert testimony for Illinois Attorney General in court ordered remand of EL15-71
2021	Advised the Columbia River Inter-Tribal Fish Commission on emerging energy issues
2020-present	Direct and Rebuttal testimonies on California Gasoline Pricing Case for Robbins, Geller, Rudman, and Dowd, LLP (Case IDs: 3:2015-cv-01749 and 3:2018-cv-01374)
2020-2025	Retained in litigation regarding McKenzie Electric contract issues (Dockets ER20-2441 and ER20-2442)
2020	Advisor on acquisition of Western Forest Products
2019-2021	FERC testimony on Jordan Cove economics for Niskanen Center (Docket CP17-495)
2018-2022	Expert witness in West Moberly v British Columbia
2018	Advisor to aboriginal landowners in solar project development
2018-2022	Analysis and expert testimony for Illinois Attorney General in official FERC complaint against PJM (Docket EL18-178)
2018	Expert witness for NCEMC in FERC proceedings

2017-2022	Advisor to the Coalition of East Side Neighborhoods on proposed Seattle area transmission
2017-2019	Advisor to Enpex on power contract litigation
2017-2018	Advisor to North Pacific Paper Corporation (NORPAC) on power contracts and business strategy
2017	Expert Witness in the British Columbia Utilities Commission hearings for the Peace Valley Landowners Association on Site C issues
2016-2017	Expert witness to the U.S. Department of Justice on nuclear waste issues
2016-2020	Advisor to the City of Logansport on utility project development and decision-making
2016	Expert testimony for Gratl and Company before the Supreme Court of British Columbia on costs of Site C project delay
2015-2019	Advisor to Huu-ay-aht tribe on Sarita Bay LNG project in British Columbia
2015-2018	Analysis and expert testimony for Illinois Attorney General in official FERC complaint against MISO (Docket EL15-71)
2015-2020	Advisor to Calbag Metals on generation project
2015-2016	Advisor to Oregon Department of Justice in the investigation of taxes owed the state by Powerex Corp.
2015	Economic analysis of the proposed 1100 MW hydro project, Site C, for the Peace Valley Landowner Association
2014-2015	Market analysis of the NYISO for the New York State Assembly
2014	Advisor to the Grand Council of the Cree on uranium mining in Quebec
2014-2018	Support for the investigation of Barclays Bank
2013-2018	Retained to do a business case analysis of the Columbia Generating Station by the Physicians for Social Responsibility

2013	Advisor to Environmental Defense Fund on gasoline and oil issues in California
2013	Advisor to Energy Foundation on Ohio competitive issues
2013	Export market review in the Maritime Link proceeding
2011	Consultant to Citizens Action Coalition of Indiana on Indiana Gasification LLC project
2010	Analysis and expert witness testimony for Block Island Intervenors concerning Deepwater offshore wind project
2010	Analysis for Eastern Environmental Law Center of 25 closed cycle plants in New York State
2010	Advisor on BPA transmission line right of way issues
2009-2010	Advisor to Gamesa USA on a marketing plan to promote a wind farm in the Pacific Northwest
2009-2010	Expert witness in City of Alexandria vs. Cleco
2009	Expert witness in City of Beaumont v. Entergy
2008-2009	Consultant to AARP Connecticut and Texas chapters on the need for a state power authority (Connecticut) and balancing energy services (Texas)
2008	Expert witness on trading and derivative issues in Barrick Gold litigation
2008-2014	Advisor to Jackson family in Pelton/Round Butte dispute
2007-2014	Advisor to the American Public Power Association on administered markets
2006-2017	Advisor to the Illinois Attorney General on electric restructuring issues
2006-2007	Advisor to the City of Portland in the investigation of Portland General Electric
2006	Expert witness for Lloyd's of London in SECLP insurance litigation
2005-2007	Expert witness for Federated Rural Electric Insurance Company and TIG Insurance in Cowlitz insurance litigation

2005-2007	Advisor to Grays Harbor PUD on market manipulation
2005-2007	Advisor to the Montana Attorney General on market manipulation
2005-2006	Expert witness for Antara Resources in Enron litigation
2005-2006	Advisor to Utility Choice Electric
2004-2005	Expert witness for Factory Mutual in Northwest Aluminum litigation
2004	Advisor to the Oregon Department of Justice on market manipulation
2003-2006	Expert witness for Texas Commercial Energy
2003-2004	Advisor to The Energy Authority
2002-2005	Advisor to the U.S. Department of Justice on market manipulation issues
2002-2004	Expert witness for Alcan in Powerex arbitration
2002-2003	Expert witness for Overton Power in IdaCorp Energy litigation
2002-2003	Expert witness for Stanislaus Food Products
2002	Advisor to VHA Pennsylvania on power purchasing
2002	Expert witness for Sierra Pacific in Enron litigation
2002-2004	Advisor to U.S. Department of Justice
2002-2007	Expert witness for Snohomish PUD in Enron litigation
2002-2010	Expert witness for Snohomish in Morgan Stanley investigation
2001-2008	Expert witness for City of Seattle, Seattle City Light and City of Tacoma in FERC's EL01-10 refund proceeding
2001-2008	Advisor to VHA Southwest on power purchasing
2001-2005	Advisor to Nordstrom

2001-2005	Advisor to Steelscape Steel on power issues in Washington and California
2001	Advisor to California Steel on power purchasing
2001	Advisor to the California Attorney General on market manipulations in the Western Systems Coordinating Council power markets
2000-2007	Expert witness for Wah Chang in PacifiCorp litigation
2000-2001	Expert witness for Southern California Edison in Bonneville Power Administration litigation
2000-2001	Advisor to Blue Heron Paper on West Coast price spikes
2000	Expert witness for Georgia Pacific and Bellingham Cold Storage in the Washington Utilities and Transportation Commission's proceeding on power costs
1999-2002	Advisor to Bayou Steel on alternative energy resources
1999-2000	Expert witness for the Large Customer Group in PacifiCorp's general rate case
1999-2000	Expert witness for Tacoma Utilities in WAPA litigation
1999-2000	Advisor for Nucor Steel and Geneva Steel on PacifiCorp's power costs
1999-2000	Advisor to Abitibi-Consolidated on energy supply issues
1999	Expert report for the Center Helios on Freedom of Information in Québec
1999	Advisor to GTE regarding Internet access in competitive telecommunication markets
1999	Advisor to Logansport Municipal Utilities
1998-2001	Advisor to Edmonton Power on utility plant divestiture in Alberta
1998-2001	Energy advisor for Boise Cascade
1998-2000	Advisor to California Steel on power purchasing

1998-2000	Advisor to Nucor Steel on power purchasing and transmission negotiations
1998-2000	Advisor to Cominco Metals on the sale of hydroelectric dams in British Columbia
1998-2000	Advisor to the Betsiamites on the purchase of hydroelectric dams in Québec
1998-1999	Advisor to the Illinois Chamber of Commerce concerning the affiliate electric and gas program
1998	Intervention in Québec's first regulatory proceeding on behalf of the Grand Council of the Cree
1998	Market forecasts for Montana Power's restructuring proceeding
1997-2004	Expert witness for Alcan in BC Hydro litigation
1997-2003	Advisor to the Manitoba Cree on energy issues in Manitoba, Minnesota and Québec; Advisor to the Grand Council of the Cree on hydroelectric development
1997-1999	Advisor to the Columbia River Intertribal Fish Commission on Columbia fish and wildlife issues
1997-1998	Advisor to Port of Morrow regarding power marketing with respect to existing gas turbine plant
1997-1998	Expert witness for Tenaska in BPA litigation
1997	Advisor to Kansai Electric on restructuring in the electric power industry (with emphasis on the California markets)
1996-1997	Bulk power purchasing for the Association of Bay Area Cities
1996-1997	Advisor to Texas Utilities on industrial issues
1996-1997	Expert witness for March Point Cogeneration in Puget Sound Power and Light litigation
1996	Advisor to Longview Fibre on contract issues
1995-2000	Bulk power supplier for several Pacific Northwest industrials
1995-1999	Advisor to Seattle City Light on industrial contract issues

1995-1997	Advisor to Tacoma Utilities on contract issues
1995-1996	Expert witness for Tacoma Utilities in WAPA litigation
1994-1995	Advisor to Idaho Power on Southwest Intertie Project marketing
1993-2001	Northwest representative for Edmonton Power
1993-1997	Expert witness for MagCorp in PacifiCorp litigation
1992-1995	Advisor to Citizens Energy Corporation
1992-1994	Negotiator on proposed Bonneville Power Administration aluminum contracts
1992	Bulk power marketing advisor to Public Service of Indiana
1991-2000	Strategic advisor to the Chairman of the Board, Portland General Corporation
1991-1993	Chairman of the Investor Owned Utilities' (ICP) committee on BPA financial reform
1991-1992	Financial advisor on the Trojan owners' negotiation team
1991	Advisor to Shasta Dam PUD on the California Oregon Transmission Project and related issues
1990-1991	Advised the Chairman of the Illinois Commerce Commission on issues pertaining to the 1990 General Commonwealth Rate Proceeding; prepared an extensive analysis of the bulk power marketing prospects for Commonwealth in ECAR and MAIN
1988	Facilitated the settlement of Commonwealth Edison's 1987 general rate case and restructuring proposal for the Illinois Commerce Commission; reported directly to the Executive Director of the Commission; responsibilities included financial advice to the Commission and negotiations with Commonwealth and interveners
1987-1988	Created the variable aluminum tariff for Big Rivers Electric Corporation: responsibilities included testimony before the Kentucky Public Service Commission and negotiations with BREC's customers (the innovative variable tariff was adopted by the Commission in August 1987); supported negotiations with the REA in support of BREC's bailout debt restructuring

1987-Present	Energy advisor to the Grand Council of the Cree of Quebec: responsible for litigation and negotiation support of hydro-electric and environmental issues in the U.S. and Canada.
1981-1989	Consulting projects including: financial advice for the Oregon AFL-CIO; statistical analysis of equal opportunity for Oregon Bank; cost of capital for the James River dioxin review; and economic analysis of qualifying facilities for Washington Hydro Associates
1980-1986	Taught classes in senior and graduate forecasting, micro-economics, and energy at Portland State University

Education

Unfinished Ph.D.	Economics, Cornell University; Teaching Assistant in micro- and macro-economics
M.A.	Economics, Portland State University, 1976; Research Assistant
B.A.	Economics, Reed College, 1972; undergraduate thesis, "Eurodollar Credit Creation"

Areas of specialization include micro-economics, statistics, and finance

Publications

April 23, 2026	"The solution to high gas prices is using less oil, not delaying California's climate programs" *CalMatters*
April 9, 2026	"The Altadena fire: Could it really happen here?" *The Bee*
February 24, 2026	"The Supremes sing a new tune: U.S. Supreme Court tariff decision" *Law360 Canada*
March 16, 2026	"Creating-competitors_-Trumps-regime-changes-in-Canada-and-Venezuela" *Law360 Canada*
March 25, 2025	"Missing tariff on the missing imports" *Law 360 Canada*
March 31, 2022	"Wither Hydro-Quebec?" *The Lawyer's Daily*
March 8, 2022	"Increasing U.S. Oil Production During Ukraine Invasions" *DC Report*

December 23, 2021	"One Tomb Raider Good: Two Tomb Raiders Better" *The Lawyer's Daily*
October 2020	"Exactly How Inefficient is the PJM Capacity Market?" *The Electricity Journal*
November 8, 2019	"Why Have PJM Capacity Markets Decoupled from Actual Capacity Bids?" *The Electricity Journal*
August 28, 2019	"Oregon natural gas facility could be fueled by Canadian sources" *The Lawyer's Daily*
March 21, 2019	"The End of Big Iron" *The Public Utility Fortnightly*
January 23, 2019	"The End of Big Hydro" *The Lawyer's Daily*
December 26, 2017	"Taking the Path Less Followed", *Vancouver Sun*
November 21, 2017	"Updating Bonneville's Strategic Plan"
October 30, 2017	"Site C Proponents Fall Prey to Sunk Costs Fallacy", *Vancouver Sun*
August 22, 2017	"Lessons from Manitoba Hydro's Financial Problems"
June 22, 2017	"Trump plan to sell BPA lines misguided"
April 11, 2017	"Affordable power or Site C power: British Columbia must choose"
February 28, 2017	"My View: Trade tariffs would hurt Americans", *The Portland Tribune*
January 8, 2017	"Many lives of Jordan Cove may have come to an end", *The Oregonian*
July 22, 2016	"Balancing an aging Hanford nuke plant against cheaper firm market power purchases", *The Oregonian*
July 7, 2016	"More roads needed to handle growth", *The Portland Tribune*
July 7, 2016	"Close the expensive Columbia Generating Station", *The Oregonian*
June 29, 2016	"Our future is in green energy, not aging, costly nuclear plants", *The Seattle Times*

May 12, 2016	"Diesel tax on heavy trucks is the right move", *The Portland Tribune*
May 2016	"Aspirational Planning: A Statistical Model of Hawthorne Bridge and Tilikum Crossing Bicycle Ride Counts", *Hatfield Graduate Journal of Public Affairs 1(1).*
January 19, 2016	"A good time for a sensibly managed Portland gas tax", *The Oregonian*
October 15, 2015	"A plan to fix Portland's roads", *The Portland Oregonian*
June 2015	"Estimating the Longevity of Commercial Nuclear Reactors", *Public Utilities Fortnightly*
December, 2014	"Nuclear Winter", *Electricity Policy*
July 2013	"Mid-Columbia Spot Markets and the Renewable Portfolio Standard", *Public Utilities Fortnightly*
April 14, 2013	"Selling Low and Buying High", *The Oregonian*
December 2012	"Are Electric Vehicles Actually Cost-Effective?", *Electricity Policy*
November 30, 2012	"Portland's Energy Credits: The trouble with buying 'green'", *The Oregonian*
July 2009	"Fingerprinting the Invisible Hand", *Public Utilities Fortnightly*
February 2008	Co-author, "The High Cost of Restructuring", *Public Utilities Fortnightly*
March 27, 2006	Co-author, "A Decisive Time for LNG", *The Daily Astorian*
February 9, 2006	"Opening the Books", *The Oregonian*
August 2005	"Squeezing Scarcity from Abundance", *Public Utilities Fortnightly*
April 1, 2002	"The California Crisis: One Year Later", *Public Utilities Fortnightly*
March 13, 2002	"A Sudden Squall", *The Seattle Times*
March 1, 2002	"What the ISO Data Says About the Energy Crisis", *Energy User News*

February 1, 2001	"What Oregon Should Know About the ISO", *Public Utilities Fortnightly*
January 1, 2001	"Price Spike Tsunami: How Market Power Soaked California", *Public Utilities Fortnightly*
March 1999	"Winners & Losers in California", *Public Utilities Fortnightly*
July 15, 1998	"Are Customers Necessary?", *Public Utilities Fortnightly*
March 15, 1998	"Can Electricity Markets Work Without Capacity Prices?", *Public Utilities Fortnightly*
February 1998	"Coping with Interruptibility", *Energy Buyer*
January 1998	"Pondering the Power Exchange", *Energy Buyer*
December 1997	"Getting There Is Half the Cost: How Much Is Transmission Service?", *Energy Buyer*
November 1997	"Is Capacity Dead?", *Energy Buyer*
October 1997	"Pacific Northwest: An Overview", *Energy Buyer*
August 1997	"A Primer on Price Volatility", *Energy Buyer*
June 1997	"A Revisionist's History of the Future", *Energy Buyer*
Winter 1996	"What Are We Waiting for?" *Megawatt Markets*
October 21, 1996	"Trading on the Index: Spot Markets and Price Spreads in the Western Interconnection", *Public Utilities Fortnightly*

McCullough Research Reports

April 14, 2026	"What Really Drives California Gas Prices: Global Oil and Refinery Profits, Not Climate Policy"
February 23, 2026	" Trump and Energy: Mercantilist or Simply Confused?"
Mar 3, 2025	"Deconstructing Trump's Energy Tariff"
Nov 27, 2023	"Comments on SB X1-2 Workshop on Maximum Gross Gasoline Refining Margin and Penalty"
Oct 20, 2022	"West Coast Gasoline Price Excursions in September 2022"

July 1, 2022	"The Road to a Zero Carbon Electric Power System – A California Example"
Apr 5, 2022	"Ensuring Transparency in Petroleum Markets"
Mar 10, 2022	"Russian Federation Actions and Intentions at the Zaporizhzhia Nuclear Power Project (ZNPP)"
Mar 7, 2022	"Accelerating the Rate of New U.S. Oil Production"
Mar 3, 2022	"Adding an Excise Tax on Russian Oil Exports"
Oct 18, 2021	"The NERC/FERC Review of ERCOT's February Rolling Blackouts"
Oct 12, 2021	"Reassessment of Site C Financial Viability Sept 28, 2021"
Sept 7, 2021	"Engineering/Economic Issues with Entergy's Response to Hurricane Ida"
June 21, 2021	"Fire and Ice: Electric Reliability Failures in California and Texas"
March 23, 2021	"Reassessment of Site-C Financial Viability – March 21, 2021"
March 12, 2021	"The Emerging Role of Biomass as a Tool in Addressing Wildfire Risks"
February 25, 2021	"ERCOT Reliability; Systematic Unpreparedness – Part 2"
February 19, 2021	"ERCOT Reliability; Systematic Unpreparedness"
October 21, 2020	"Blaming the Innocent; Praising the Uninvolved"
October 12, 2020	"Reassessment of Site-C Financial Viability"
November 11, 2019	"PG&E and the Public Power Option"
August 19, 2019	"Is Existing Coal Actually Cost Effective in the Presence of Falling Renewable Prices?"
June 5, 2019	"The Questionable Economics of Jordan Cove LNG Terminal"
January 14, 2019	"The End of Big Iron: How Wind and Solar Became Cheaper than Hydro, Coal, and Nuclear"

December 10, 2018	"Why Have PJM Capacity Markets Decoupled from Actual Capacity Bids?"
April 20, 2018	"Privatizing BPA's Assets and Liabilities"
April 12, 2018	"ASC 980 and the Decision to Complete Site C"
March 1, 2018	"Are Bitcoin Miners Suitable Electric Loads?"
February 14, 2018	"FY 2019 Update: Privatization of Bonneville Power Administration's Transmission Assets"
January 23, 2018	"Update of the CGS costs and implications"
November 21, 2017	"Updating Bonneville's Strategic Plan"
November 16, 2017	"Response to Questions Posed by the Deputy Minister of British Columbia What we have learned from the BCUC's Final Report"
November 2, 2018	"What we have learned from the BCUC's Final Report"
October 23, 2017	"Site C Inquiry Situation Report"
October 10, 2017	"Problems with British Columbia Hydro's F1.11 Response"
October 10, 2017	"Problems with British Columbia Hydro's F1.8 Response"
October 10, 2017	"Problems with British Columbia Hydro's F1.7 Response"
October 10, 2017	"Problems with British Columbia Hydro's F1.6 Response"
October 2, 2017	"Our answer to BC Hydro's question 16"
October 2, 2017	"Our answer to BC Hydro's question 20"
September 28, 2017	"A reflection on sunk costs"
September 28, 2017	"Our answer to BC Hydro's questions 46 and 47"
September 24, 2017	"Our answer to BC Hydro's question 22"
September 21, 2017	"British Columbia Utilities Commission's Preliminary Findings"
September 13, 2017	"What we have learned about Site C"
September 11, 2017	"Deloitte LLP's Two Site C Reports"

August 22, 2017	"Lessons from Manitoba Hydro's Financial Problems"
June 13, 2017	"Privatization of Bonneville Power Administration's Transmission Assets"
May 8, 2017	"Response to Public Power Council staff comments on replacing the Columbia Generating Station with lower cost renewables"
April 3, 2017	"Who actually pays for the Columbia Generating Station?"
February 15, 2017	"Replacing the Columbia Generating Station with Renewable Energy"
November 14, 2016	"Review of 'Economic Analysis of Proposed Changes to the Single Dwelling Zone Development Standard'"
October 5, 2016	"The Falling Price of Renewable Energy Relative to Conventional Generation"
October 3, 2016	"Statistical Evidence on the Increase in Portland Home Values Correlated with Historic Districts"
September 5, 2016	"Why are House Prices so high in the Portland Metropolitan Area?"
July 8, 2016	"Historic District Econometric Literature Review"
June 21, 2016	"Columbia Generating Station (CGS) Market Update"
November 19, 2015	"Market Cost of the Columbia Generating Station During the FY 2014/2015 Refueling Cycle"
September 30, 2015	"Decrypting New York's "Secret" Electric Bids"
September 9, 2015	"Market Power in West Coast Gasoline Markets: September Update"
September 8, 2015	"August 10, 2015 PADD 2 Gasoline Spike at BP Whiting's Pipestill 12"
July 23, 2015	"Market Power in West Coast Gasoline Markets: July Update"
June 23, 2015	"Market Power in West Coast Gasoline Markets: June Update"
May 25, 2015	"Site C Business Case Assumptions Review"

April 7, 2015	"2015 Paducah Update"
April 6, 2015	"Market Power in West Coast Gasoline Markets: April Update"
March 23, 2015	"Market Power in West Coast Gasoline Markets"
March 20, 2015	"Daniel Poneman and the Paducah Transaction"
January 2, 2015	"Data and Methodological Errors in the Portland Commercial Street Fee"
December 15, 2014	Report to the Bureau d'audiences publiques sur l'environment (BAPE), "Uranium Mining in Quebec: Four Conclusions"
February 11, 2014	"Energy Northwest's Revised Analysis of the Paducah Fuels Transaction"
January 25, 2014	"Energy Northwest Losses in the 2013 Forward Purchase of Nuclear Fuel"
January 2, 2014	"Review of the November 2013 Energy Northwest Study"
December 11, 2013	"Economic Analysis of the Columbia Generating Station"
February 21, 2013	"McCullough Research Rebuttal to Western States Petroleum Association"
November 15, 2012	"May and October 2012 Gasoline Price Spikes on the West Coast"
June 5, 2012	"Analysis of West Coast Gasoline Prices"
October 3, 2011	"Lowering Florida's Electricity Prices"
July 14, 2011	"2011 ERCOT Blackouts and Emergencies"
March 1, 2010	"Translation" of the September 29, 2008 NY Risk Consultant's Hydraulics Report to Manitoba Hydro CEO Bob Brennan
December 2, 2009	"Review of the ICF Report on Manitoba Hydro Export Sales"
June 5, 2009	"New York State Electricity Plants' Profitability Results"
May 5, 2009	"Transparency in ERCOT: A No-cost Strategy to Reduce Electricity Prices in Texas"

April 7, 2009	"A Forensic Analysis of Pickens' Peak: Speculation, Fundamentals or Market Structure"
March 30, 2009	"New Yorkers Lost $2.2 Billion Because of NYISO Practices"
March 3, 2009	"The New York Independent System Operator's Market-Clearing Price Auction is Too Expensive for New York"
February 24, 2009	"The Need for a Connecticut Power Authority"
January 7, 2009	"Review of the ERCOT December 18, 2008 Nodal Cost Benefit Study"
August 6, 2008	"Seeking the Causes of the July 3rd Spike in World Oil Prices" (updated September 16, 2008)
April 7, 2008	"Kaye Scholer's Redacted 'Analysis of Possible Complaints Relating to Maryland's SOS Auctions'"
February 1, 2008	"Some Observations on Societe Generale's Risk Controls"
June 26, 2007	"Looking for the 'Voom': A Rebuttal to Dr. Hogan's 'Acting in Time: Regulating Wholesale Electricity Markets'"
September 26, 2006	"Did Amaranth Advisors, LLC Attempt to Corner the March 2007 NYMEX at Henry Hub?"
May 18, 2006	"Developing a Power Purchase/Fuel Supply Portfolio: Energy Strategies for Cities and Other Public Agencies"
April 12, 2005	"When Oil Prices Rise, Using More Ethanol Helps Save Money at the Gas Pump"
April 12, 2005	"When Farmers Outperform Sheiks: Why Adding Ethanol to the U.S. Fuel Mix Makes Sense in a $50-Plus/Barrel Oil Market"
April 12, 2005	"Enron's Per Se Anti-Trust Activities in New York"
February 15, 2005	"Employment Impacts of Shifting BPA to Market Pricing"
June 28, 2004	"Reading Enron's Scheme Accounting Materials"
June 5, 2004	"ERCOT BES Event"
August 14, 2003	"Fat Boy Report"
May 16, 2003	"CERA Decision Brief"

January 16, 2003	"California Electricity Price Spikes"
November 29, 2002	"C66 and Artificial Congestion Transmission in January 2001"
August 17, 2002	"Three Days of Crisis at the California ISO"
July 9, 2002	"Market Efficiencies"
June 26, 2002	"Senate Fact Sheet"
June 5, 2002	"Congestion Manipulation"
May 5, 2002	"Enron's Workout Plan"
March 31, 2002	"A History of LJM2"
February 2, 2002	"Understanding LJM"
January 22, 2002	"Understanding Whitewing"

Testimony and Comment

April 15, 2025	Expert Report in Apitipi Anicinapek Nation v. His Majesty the King in Right of Ontario, Minister of Natural Resources, Ontario Power Generation Inc., Firstlight Power, and Algonquin Power & Utilities Corp. Court File Number: DC-24-00000656-00JR
May 7, 2024	Testimony before the United States District Court Southern District of California on issues arising in Case No.: 15cv1749-JO-KSC and 18cv1374-JO-KSC
October 9, 2023	Supplemental testimony in FERC Dockets DOCKET NOS. ER20-2441-002, ER20-2442-002, EL20-68-002, ER21-426-001, ER21-768-002, and ER21-682-002
March 31, 2023	Surrebuttal testimony in FERC Dockets DOCKET NOS. ER20-2441-002, ER20-2442-002, EL20-68-002, ER21-426-001, ER21-768-002, and ER21-682-002
July 15, 2022	Responsive testimony in FERC Dockets DOCKET NOS. ER20-2441-002, ER20-2442-002, EL20-68-002, ER21-426-001, ER21-768-002, and ER21-682-002
March 22, 2023	Transparency in the Pipeline: Addressing Gasoline Price Volatility in California. Testimony before the California Utilities and Energy Committee
February 22, 2023	Petroleum Windfall Profits Penalty: Will Californians Get Relief at the Gas Pump? Testimony before the California Senate Utilities and Communications Committee
April 5, 2022	Testimony before the U.S. Senate Committee on Commerce, Science, and Transportation on petroleum market transparency
January 11, 2020	Where Do Prices Come From? Lecture at Portland State University
October 10, 2019	Declaration filed in Bartlett et al v. BP West Coast Products LLC et al
July 1, 2019	Natural Gas Supplies for the Proposed Jordan Cove LNG Terminal in FERC CP17-494-000
November 26, 2018	Affidavit in FERC ER19-155-000
November 6, 2018	Affidavit in FERC EL16-49-000

June 1, 2018	Four Rebuttal affidavits for West Moberly v British Columbia.
January 31, 2018	Expert report affidavit West Moberly v British Columbia
November 30, 2017	Presentation to the British Columbia Cabinet on Site C
October 13, 2017	Testimony before the British Columbia Utilities Commission on Site C
June 7, 2017	Testimony before the U.S. Court of Claims on Nuclear Storage Costs
December 14, 2016	Testimony to the U.S. Court of Federal Claims on behalf of the U.S. Department of Justice regarding nuclear rate case
February 10, 2016	Testimony before the Supreme Court of British Columbia on the costs and benefits of delaying Site C dam
August 24, 2015	Testimony to the New York State Public Service Commission on behalf of the New York State Legislative Assembly
May 29, 2015	Testimony before the Federal Energy Regulatory Commission on behalf of Illinois Attorney General Lisa Madigan
December 15, 2014	Testimony before the Bureau d'audiences publiques sur l'environment (BAPE) in Quebec, "Uranium Mining in Quebec: Four Conclusions"
November 15, 2012	Testimony before the California State Senate Select Committee on Bay Area Transportation on West Coast gasoline price spikes in 2012
July 20, 2010	Testimony before the Rhode Island Public Utility Commission on the Deepwater offshore wind project
April 7, 2009	Testimony before the U.S. Senate Committee on Energy and Natural Resources on "Pickens' Peak"
March 5, 2009	Testimony before the New York Assembly Committee on Corporations, Authorities and Commissions, and the Assembly Committee on Energy, "New York Independent System Operators Market Clearing Price Auction is Too Expensive for New York"

February 24, 2009	Testimony before the Energy and Technology Committee, Connecticut General Assembly, "An Act Establishing a Public Power Authority" on behalf of AARP
September 16, 2008	Testimony before the U.S. Senate Committee on Energy and Natural Resources, "Depending On 19th Century Regulatory Institutions to Handle 21st Century Markets"
January 7, 2008	Supplemental Comment ("The Missing Benchmark in Electricity Deregulation") before the Federal Energy Regulatory Commission on behalf of American Public Power Association, Docket Nos. RM07-19-000 and AD07-7-000
August 7-8, 2007	Testimony before the Oregon Public Utility Commission on behalf of Wah Chang, Salem, Oregon, Docket No. UM 1002
February 23 and 26, 2007	Testimony before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL03-180
October 2, 2006	Direct Testimony before the Régie de l'énergie, Gouvernement du Québec on behalf of the Grand Council of the Cree
August 22, 2006	Rebuttal Expert Report on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. H-01-3624
June 1, 2006	Expert Report on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. H-01-3624
May 8, 2006	Testimony before the U.S. Senate Democratic Policy Committee, "Regulation and Forward Markets: Lessons from Enron and the Western Market Crisis of 2000-2001"
December 15, 2005	Direct Testimony before the Public Utility Commission of the State of Oregon on behalf of Wah Chang, Wah Chang v. PacifiCorp in Docket UM 1002
December 14, 2005	Deposition before the United States District Court Western District of Washington at Tacoma on behalf of Federated Rural Electric Insurance Exchange and TIG Insurance Company, Federated Rural Electric Insurance Exchange and TIG Insurance Company v. Public Utility District No. 1 of Cowlitz County, No. 04-5052RBL
December 4, 2005	Expert Report on behalf of Utility Choice Electric in Civil Action No. 4:05-CV-00573

July 27, 2005	Expert Report before the United States District Court Western District of Washington at Tacoma on behalf of Federated Rural Electric Insurance Exchange and TIG Insurance Company, Federated Rural Electric Insurance Exchange and TIG Insurance Company v. Public Utility District No. 1 of Cowlitz County, Docket No. CV04-5052RBL
May 6, 2005	Rebuttal Testimony before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL03-180, et al.
May 1, 2005	Rebuttal Expert Report on behalf of Factory Mutual, Factory Mutual v. Northwest Aluminum
March 24-25, 2005	Deposition by Enron Power Marketing, Inc. before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL03-180, et al.
February 14, 2005	Expert Report on behalf of Factory Mutual, Factory Mutual v. Northwest Aluminum
January 27, 2005	Supplemental Testimony before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL03-180, et al.
April 14, 2004	Deposition by Enron Power Marketing, Inc. and Enron Energy Services before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL03-180, et al.
April 10, 2004	Rebuttal Testimony on behalf of the Office of City and County Attorneys, San Francisco, California, City and County Attorneys, San Francisco, California v. Turlock Irrigation District, Non-Binding Arbitration
February 24, 2004	Direct Testimony before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL03-180, et al.
March 20, 2003	Rebuttal Testimony before the Federal Energy Regulatory Commission on behalf of the City of Seattle, Washington, Docket No. EL01-10, et al.
March 11-13, 2003	Deposition by IdaCorp Energy L.P. before the District Court of the Fourth Judicial District of the State of Idaho on behalf of Overton Power District No. 5, State of Nevada, IdaCorp

	Energy L.P. v. Overton Power District No. 5, Case No. OC 0107870D
March 3, 2003	Expert Report before the District Court of the Fourth Judicial District of the State of Idaho on behalf of Overton Power District No. 5, State of Nevada, IdaCorp Energy L.P. v. Overton Power District No. 5, Case No. OC 0107870D
February 27, 2003	Direct Testimony before the Federal Energy Regulatory Commission on behalf of the City of Tacoma, Washington and the Port of Seattle, Washington, Docket No. EL01-10-005
October 7, 2002	Rebuttal Testimony before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL02-26, et al.
October 2002	Expert Report before the Circuit Court of the State of Oregon for the County of Multnomah on behalf of Alcan, Inc., Alcan, Inc. v. Powerex Corp., Case No. 50 198 T161 02
September 27, 2002	Deposition by Morgan Stanley Capital Group, Inc. before the Federal Energy Regulatory Commission on behalf of Nevada Power Company and Sierra Pacific Power Company, Docket No. EL02-26, et al.
August 8-9, 2002	Deposition by Morgan Stanley Capital Group, Inc. before the Federal Energy Regulatory Commission on behalf of Nevada Power Company and Sierra Pacific Power Company, Docket No. EL02-26, et al.
August 8, 2002	Deposition by Morgan Stanley Capital Group, Inc. before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL02-26, et al.
June 28, 2002	Direct Testimony before the Federal Energy Regulatory Commission on behalf of the City of Tacoma, Washington, Docket No. EL02-26, et al.
June 25, 2002	Direct Testimony before the Federal Energy Regulatory Commission on behalf of Public Utility District No. 1 of Snohomish County, Washington, Docket No. EL02-26, et al.
June 25, 2002	Direct Testimony before the Federal Energy Regulatory Commission on behalf of Nevada Power Company and Sierra Pacific Power Company, Docket No. EL02-26, et al.

May 6, 2002	Rebuttal Testimony before the Public Service Commission of Utah on behalf of Magnesium Corporation of America in the Matter of the Petition of Magnesium Corporation of America to Require PacifiCorp to Purchase Power from MagCorp and to Establish Avoided Cost Rates, Docket No. 02-035-02
April 11, 2002	Testimony before the U.S. Senate Committee on Commerce, Science and Transportation, Washington DC
February 13, 2002	Testimony before the U.S. House of Representatives Subcommittee on Energy and Air Quality, Washington DC
January 29, 2002	Testimony before the U.S. Senate Committee on Energy and Natural Resources, Washington DC
August 30, 2001	Rebuttal Testimony before the Federal Energy Regulatory Commission on behalf of Seattle City Light, Docket No. EL01-10
August 16, 2001	Direct Testimony before the Federal Energy Regulatory Commission on behalf of Seattle City Light, Docket No. EL01-10
June 12, 2001	Rebuttal Testimony before the Public Utility Commission of the State of Oregon on behalf of Wah Chang, Wah Chang v. PacifiCorp in Docket UM 1002
April 17, 2001	Before the Public Utility Commission of the State of Oregon, Direct Testimony on behalf of Wah Chang, Wah Chang v. PacifiCorp in Docket UM 1002
March 17, 2000	Rebuttal Testimony before the Public Service Commission of Utah on behalf of the Large Customer Group in the Matter of the Application of PacifiCorp for Approval of Its Proposed Electric Rate Schedules and Electric Service Regulations, Docket No. 99-035-10
February 1, 2000	Direct Testimony before the Public Service Commission of Utah on behalf of the Large Customer Group in the Matter of the Application of PacifiCorp for Approval of Its Proposed Electric Rate Schedules and Electric Service Regulations, Docket No. 99-035-10

Presentations

May 8, 2026	"The Political Economy of Wildfires"

April 14, 2026	"What Causes Urban Wildfires: Applying L.A.'s Lessons to Portland"
March, 2026	"California pays more at the pump. Don't blame climate policy"
July 1, 2022	"The road to a Zero Carbon Electric Power System – A California Example"
March 16, 2021	"The Emerging Role of Biomass as a Tool in Addressing Wildfire Risks"
April 8, 2020	"How Efficient is PJM's Capacity Market?" The Future of Power Markets webinar, presented by *Power Markets Today*.
January 18, 2019	"The End of Big Iron" Portland State University
May 15, 2018	"The Tower of Bitcoin" CAPRE Portland Summit Blockchain Panel.
April 11, 2018	"Breakdown and Post-Analysis of the Site C Review"
January 26, 2018	"Prudency, Recovery, and Rates", Site C Summit
December 11, 2017	"Final Decision Review", PVLA Press Conference
January 23-24, 2017	"Are Electric Markets Obsolete?", Buying & Selling Electric Power Conference, Seattle, Washington
December 3, 2015	"Ozymandias: Seventeen years of administered markets, high costs, and poor eligibility", Utility Markets Today, Rockville, Maryland
May 6, 2014	"Economic Analysis of the Columbia Generating Station", Energy Northwest, Boise, Idaho
April 30, 2014	"Economic Analysis of the Columbia Generating Station", Portland State University, Portland, Oregon
April 22, 2014	"Economic Analysis of the Columbia Generating Station", Clark County, Vancouver, Washington
January 9, 2014	"Economic Analysis of the Columbia Generating Station", Northwest Power & Conservation Council, Portland, Oregon
January 1, 2014	"Economic Analysis of the Columbia Generating Station", Bonneville Power Administration, Portland, Oregon

December 2, 2013	"Economic Analysis of the Columbia Generating Station", Skamania, Carson, Washington
December 1, 2013	"Peak Peddling: Has Portland Bicycling Reached the Top of the Logistic Curve?" Oregon Transportation Research and Education Consortium, Portland, Oregon
July 12, 2013	"Economic Analysis of the Columbia Generating Station", Tacoma, Washington
June 21, 2013	"Economic Analysis of the Columbia Generating Station", Seattle City Light, Seattle, Washington
January 29, 2013	"J.D. Ross (Who)", Portland Rotary Club, Portland, Oregon.
January 13, 2011	"Estimating the Consumer's Burden from Administered Markets", American Public Power Association conference, Washington, DC
October 15, 2009	"The Mysterious New York Market", EPIS, Tucson, Arizona
October 14, 2009	"Do ISO Bidding Processes Result in Just and Reasonable Rates?", legal seminar, American Public Power Association, Savannah, Georgia
June 22, 2009	"Pickens' Peak Redux: Fundamentals, Speculation, or Market Structure", International Association for Energy Economics
June 5, 2009	"Transparency in ERCOT: A No-cost Strategy to Reduce Electricity Prices in Texas", Presentation at Texas Legislature
May 8, 2009	"Pickens' Peak", Economics Department, Portland State University
April 7, 2009	"Pickens' Peak: Speculators, Fundamentals, or Market Structure", 2009 EIA energy conference, Washington, DC
February 4, 2009	"Why We Need a Connecticut Power Authority", presentation to the Energy and Technology Committee, Connecticut General Assembly
October 28, 2008	"The Impact of a Volatile Economy on Energy Markets", NAESCO annual meeting, Santa Monica, California
April 1, 2008	"Connecticut Energy Policy: Critical Times…Critical Decisions", House Energy and Technology Committee, the Connecticut General Assembly

May 23, 2007	"Past Efforts and Future Prospects for Electricity Industry Restructuring: Why Is Competition So Expensive?", Portland State University
February 26, 2007	"Trust, But Verify", Take Back the Power Conference, National Press Club, Washington, DC
May 18, 2006	"Developing a Power Purchase/Fuel Supply Portfolio"
February 12, 2005	"Northwest Job Impacts of BPA Market Rates"
January 5, 2005	"Why Has the Enron Crisis Taken So Long to Solve?", Public Power Council, Portland, Oregon
September 20, 2004	"Project Stanley and the Texas Market", Gulf Coast Energy Association, Austin, Texas
September 9, 2004	"Back to the New Market Basics", EPIS, White Salmon, Washington
June 8, 2004	"Caveat Emptor", ELCON West Coast Meeting, Oakland, California
June 9, 2004	"Enron Discovery in EL03-137/180"
March 31, 2004	"Governance and Performance", Public Power Council, Portland, Oregon
January 23, 2004	"Resource Choice", Law Seminars International, Seattle, Washington
January 17, 2003	"California Energy Price Spikes: The Factual Evidence", Law Seminars International Seattle, Washington
January 16, 2003	"The Purloined Agenda: Pursuing Competition in an Era of Secrecy, Guile, and Incompetence"
September 17, 2002	"Three Crisis Days", California Senate Select Committee, Sacramento, California
June 10, 2002	"Enron Schemes", California Senate Select Committee Sacramento, California
May 2, 2002	"One Hundred Years of Solitude"
March 21, 2002	"Enron's International Ventures", Oregon Bar International Law Committee, Portland, Oregon

March 19, 2002	"Coordinating West Coast Power Markets", GasMart, Reno, Nevada
March 19, 2002	"Sauron's Ring", GasMart, Reno, Nevada
January 25, 2002	"Deconstructing Enron's Collapse: Buying and Selling Electricity on The West Coast", Seattle, Washington
January 18, 2002	"Deconstructing Enron's Collapse", Economics Seminar, Portland State University
November 12, 2001	"Artifice or Reality", EPIS Energy Forecast Symposium, Skamania, Washington
October 24, 2001	"The Case of the Missing Crisis" Kennewick Rotary Club, Kennewick, Washington
August 18, 2001	"Preparing for the Next Decade"
June 26, 2001	"Examining the Outlook on Deregulation"
June 25, 2001	Presentation, Energy Purchasing Institute for International Research (IIR), Dallas, Texas
June 6, 2001	"New Horizons: Solutions for the 21st Century", Federal Energy Management-U.S. Department of Energy, Kansas City, Kansas
May 24, 2001	"Five Years"
May 10, 2001	"A Year in Purgatory", Utah Industrial Customers Symposium-Utah Association of Energy Users, Salt Lake City, Utah
May 1, 2001	"What to Expect in the Western Power Markets this Summer", Western Power Market Seminar, Denver, Colorado
April 23, 2001	"Emerging Markets for Natural Gas", West Coast Gas Conference, Portland, Oregon
April 18, 2001	"Demystifying the Influence of Regulatory Mandates on the Energy Economy" Marcus Evans Seminar, Denver, Colorado
April 4, 2001	"Perfect Storm", Regulatory Accounting Conference, Las Vegas, Nevada
March 21, 2001	"After the Storm 2001", Public Utility Seminar, Reno, Nevada

February 21, 2001	"Future Imperfect", Pacific Northwest Steel Association, Portland, Oregon
February 12, 2001	"Power Prices in 2000 through 2005", Northwest Agricultural Chillers, Bellingham, Washington
February 6, 2001	Presentation, Boise Cascade Management, Boise, Idaho
January 19, 2001	"Wholesale Pricing and Location of New Generation Buying and Selling Power in the Pacific Northwest", Seattle, Washington
October 26, 2000	"Tsunami: Market Prices since May 22nd", International Association of Refrigerated Warehouses, Los Vegas, California
October 11, 2000	"Tsunami: Market Prices since May 22nd", Price Spikes Symposium, Portland, Oregon
August 14, 2000	"Anatomy of a Corrupted Market", Oregon Public Utility Commission and Oregon State Energy Office, Salem, Oregon
June 30, 2000	"Northwest Market Power", Governor Locke of Washington, Seattle, Washington
June 10, 2000	"Northwest Market Power", Oregon Public Utility Commission and Oregon State Energy Office, Salem, Oregon
June 5, 2000	"Northwest Market Power", Georgia Pacific Management
May 10, 2000	"Magnesium Corporation Developments", Utah Public Utilities Commission
May 5, 2000	"Northwest Power Developments", Georgia Pacific Management
January 12, 2000	"Northwest Reliability Issues", Oregon Public Utility Commission

Volunteer Positions

2015-2024	Board member, Portland State University Master in Public Policy Advisory Committee
2016-2017	Eastmoreland Neighborhood Association, Treasurer
2013-2016	Eastmoreland Neighborhood Association, President

2013-2017	Southeast Uplift Neighborhood Coalition, President
2013-2022	City of Portland Office of Management and Finance Advisory Committee
1990-Present	Chairman, Portland State University Economics Department Advisory Committee

Membership

American Economic Association
American Financial Association
Econometric Society
Western Economic Association