(Economics)

Jim Lazar is a consulting economist specializing in utility rate and resource analysis. In more than seventy appearances before regulatory bodies in the United States and abroad, he has provided expert assistance in the areas of revenue requirement, cost of capital, formation of new publicly owned utility systems, electric and gas utility integrated resource planning, cost of service and rate design, least cost and integrated resource planning, the appropriate regulatory treatment of excess capacity, subsidiary profits, and regulatory treatment of real estate transactions.

Technical Assistance: Jim Lazar has provided technical assistance to local, state, and federal public agencies, public interest groups, industry trade groups, and electric utilities. Expert testimony has been presented before the state regulatory commissions of Washington, Idaho, Montana, Hawaii, Illinois, Oregon, and Arizona, before the Federal Energy Regulatory Commission, Nuclear Regulatory Commission, Economic Regulatory Administration, Bonneville Power Administration, California Energy Commission, British Columbia Utilities Commission, and numerous local regulatory agencies. Internationally, Mr. Lazar has assisted clients in New Zealand, Ireland, Mozambique, Namibia, and Canada with utility rate and resource analysis.

Training: Jim Lazar has taught Energy Economics as a member of the faculty of Edmonds Community College, and previously served as a faculty member to the Western Consumer Utility Training Center in 1982. He was the lead author of a book on utility rate and resource issues, The People's Power Guide, published in 1982, and a handbook on electric utility cost of service analysis prepared for the Arizona Corporation Commission in 1993. He has presented papers at numerous conferences in the United States, as well as Canada, New Zealand, and Austria, and has taught courses on utility resource and regulatory principles in The Philippines, India, China, Indonesia, Brazil, and for the regulatory Commission of Kyrgyzstan.

EDUCATION:

University of California, Los Angeles Shimer College, Mt. Carroll, Illinois

Western Washington University, Bellingham B.A. 1974
Graduate work: Western Washington University

Western Washington University (Economics)
University of Washington (Public Administration)

EMPLOYMENT HISTORY

1979 to Present

Self-employed consulting economist, and community college faculty: Transportation studies; Utility rate and resource analysis, conservation program design and evaluation, transportation system analysis. Associate with the Regulatory Assistance Project since 1999.

1983-84

Research Director, Northwest Energy Coalition: Directed studies on energy resource cost-effectiveness, including nuclear, conservation, building codes, and unconventional resources;

1982

Research Associate, Metropolitan Development Council of Tacoma, Washington: Research Director, People's Organization for Washington Energy Resources

PUBLICATIONS AND RESEARCH [Excluding Regulatory Proceeding Testimony]

<u>Mauritius Regulatory Technical Assistance Definitional Mission Report</u>, prepared for the U.S. Trade Development Authority, Regulatory Assistance Project, 2005

<u>Hawaii Energy Utility Regulation And Taxation,</u> prepared for Hawaii Energy Policy Project in conjunction with J. Carl Freedman, 2003

<u>Power Market Restructuring Issues: Integrated Monopoly → Single Buyer → Wholesale Market, prepared for the Electricity Control Board of Namibia in conjunction with Nexant Corporation / U.S. Agency for International Development, 2003</u>

History, Current Status, and Future of the Residential Exchange, Snohomish Public Utility District, 2003

Tools Available to BPA and WAPA to Develop Renewables, Western States Renewable Energy Summit, Reno, Nevada, 2003

<u>The Role of Regulation, and Starting and Staffing a Regulatory Commission, prepared for the Central Electricity Commission of Mozambique in conjunction with Nexant Corporation / U.S. Agency for International Development, 2003</u>

<u>Low-Income and Rural Electrification Assistance Programs for the Indonesia Social Electricity Development Fund</u>, Prepared for the Institute of International Education / U.S. Agency for International Development, 2002

<u>Convergence: Electricity and Natural Gas in Washington State</u>, Prepared for Washington State Office of Trade and Economic Development, 2001 (One of seven authors)

Improving State Electricity Taxation, Prepared for Regulatory Assistance Project, 2001 (with Cheryl Harrington)

<u>Lessons Learned from the California Energy Crisis</u>: Prepared for Regulatory Assistance Project / Energy Foundation China Sustainable Energy Program, 2001

<u>Consumer Protection and Customer Service in Emerging Utility Industry Structures</u>: Prepared for Regulatory Assistance Project (Brazil) / USAID, 2000

Electric Cost of Service Analysis: Prepared for City of Burbank, California Public Service Department, 2000

Tariff Analysis in a Regulatory Regime: Prepared for Administrative Staff College of India / USAID, 1999

Energy Efficiency Promotion Policies: Prepared for Administrative Staff College of India / USAID, 1999

<u>Demand Side Management in a Regulatory Environment</u>: Prepared for Institute of Financial Management and Research (Madras, India) / USAID, 1999

<u>Consumer Advocacy in a Restructured Electric Utility Industry</u>: Prepared for Administrative Staff College of India / USAID, 1999

Private Energy Utilities and Bellevue's Options for the Future: Prepared for City of Bellevue, Washington, 1998

Energy Sector Regulation Principles and Practice: Prepared for Philippines Department of Energy / USAID, 1997

Electric Rate Unbundling for a Competitive Market: Prepared for Washington Water Power Company / Idaho PUC, 1997

Retail Wheeling Pilot Proposal, Puget Sound Power and Light Company, Office of the Attorney General, State of Washington 1996

Conservco: An Option for Achieving Efficiency in a Competitive Utility Market Structure, Prepared for the Snohomish County Public Utility District, 1995

Making Integrated Resource Planning Better and Cheaper, British Columbia Energy Coalition, 1995

<u>Cost Elements and Study Organization For Embedded Cost of Service Analysis</u>, Briefing Paper to Arizona Corporation Commission, (Arizona Corporation Commission, July, 1992)

<u>Transmission and Distribution Cost Allocation in Embedded Cost of Service Analysis</u>, Briefing Paper to Arizona Corporation Commission, (Arizona Corporation Commission, July, 1992)

<u>Production Cost Allocation in Embedded Cost of Service Analysis</u>, Briefing Paper to Arizona Corporation Commission, (Arizona Corporation Commission, July, 1992)

<u>Utility Connection Charges and Credits:</u> <u>Stepping Up the Rate of Energy Efficiency Implementation</u>, (Second International Conference on Energy Consulting, Graz, Austria, 1991)

Electric Power Resource Evaluation for Improved Fish Migration, (Pacific States Marine Fisheries Commission, 1991)

Long-Term Financial Model Review: Prepared for Emerald People's Utility District, 1991

Unrecovered Costs of Serving New Residential Space Heat Loads, (Mason PUD #3, June, 1990)

<u>Direct Use of Natural Gas for Residential Space and Water Heat Compared to Gas-Fired Electric Generation for Hydro-firming; Thermodynamic, Economic, and Environmental Impacts, (Association of Northwest Gas Utilities, 1990)</u>

Model Energy Conservation and Power Planning Action Plan, (Northwest Conservation Act Coalition, 1990)

Ten Year Financial Plan Analysis for Startup, Oregon Trail Electric Cooperative, 1988

Impact of Operation of the Columbia Basin Irrigation Project on Northwest Electric Power Users, 1954-1986; (Natural Resources Defense Council, 1987)

WPPSS Preservation Costs and the BPA Residential and Small Farm Exchange (Mason County PUD, 1986)

WPPSS Nuclear Plants #1 and #3 in a Rapidly Changing Environment, (Snohomish County PUD, 1986)

WPPSS #1 and #3: Costs and Alternatives, (Northwest Conservation Act Coalition, 1984)

<u>Do or Die: The Seabrook Nuclear Generating Station and the Public Service Company of New Hampshire,</u> (Campaign for Ratepayer Rights, 1984)

Should Utility Conservation Efforts Continue During a Surplus, (Pacific Northwest Regional Economic Conference, 1984)

WPPSS Nuclear Plant #3: Where Now?, (Northwest Conservation Act Coalition, 1983)

A Ratepayer Perspective on Avoided Cost Pricing Under PURPA Section 210, (California Energy Commission, 1982)

The People's Power Guide: A Manual of Electric Utility Policies for Consumer Activists, (People's Organization for Washington Energy Resources, 1982)

Model Conservation and Electric Power Plan for the Pacific Northwest, (Northwest Conservation Act Coalition, 1982)

<u>Electricity Market Decontrol through Windfall Profits Taxation and Competitive Power Supply Contracting.</u> (PNW Regional Economic Conference, 1982)

Northwest Electric Load Shaping for Fish Enhancement, (Romer Associates/National Marine Fisheries Service, 1981)

Conserving Electricity in the Pacific Northwest, (Pacific Northwest Regional Economic Conference, 1980)

JIM LAZAR CONSULTING ECONOMIST RECENT CONSULTING CLIENTS [PARTIAL LISTING]

UTILITIES AND UTILITY ASSOCIATIONS

City of Burbank, California

Emerald People's Utility District [Eugene, OR]

Hawaiian Electric Company

Mason County Public Utility District #3 [Shelton, WA]

Salem Electric Cooperative [Salem, OR]

Snohomish County Public Utility District [Everett, WA]

Northwest Gas Association [Portland, OR]

PUBLIC AGENCIES

Arizona Corporation Commission

City of Bellevue, Washington

Environmental Protection Agency

Hawaii Department of Commerce and Consumer Affairs

Idaho Public Utilities Commission

Mount Rainier National Park

National Marine Fisheries Service

Office of the Attorney General, Washington

Pacific States Marine Fisheries Commission

Research Corporation of the University of Hawaii

Washington State Department of Community, Trade, and Economic

Development

Washington State Department of Wildlife

Washington Utilities and Transportation Commission

NONPROFIT ENTITIES

Association for the Advancement of Sustainable Energy Policy (Canada)

British Columbia Energy Coalition (Canada)

Citizen's Utility Board, (Illinois)

Columbia River Intertribal Fish Commission

EnergyWatch (New Zealand)

Institute of International Education

Montana Electricity Buying Cooperative

Natural Resources Defense Council

Nez Perce Indian Nation

Northwest Conservation Act Coalition

Regulatory Assistance Project

Squamish Indian Nation (Canada)

Time to Respect Earth's Ecosystems (Canada)

Yakima Indian Nation

EXPERT TESTIMONY AND ENERGY/UTILITY RESEARCH BY JIM LAZAR

YEAR	ORG	FORUM	CASE #	TOPIC/TITLE
1979	SKAG	NRC		Alternatives to Skagit Nuclear Plant
1979	PGN	OPUC	UF-3518	Review Increase Rate of Return
1979	PSD	WUTC	U-79-70	Insulation Stds, Conservation Loan Prog Industry
1979	PSD	NRC		Relocation of Skagit Plant
1979		WPPSS		Critique of WPPSS Bond Statements
1979		SENATE		"Summary Data on Petrol Supply Demand & Price"
1980	PSD	WUTC	U-80-10	Resource Alternatives, Error in Water Study Rate Study
1980	PSD	WUTC	U-78-05	Rate Analysis and Service Fees
1980	IPC	IPUC		Conservation Based Hook-up Charges
1981		GRAY		Review of PURPA Rate Making Standards
1981		SCL		"Giving Your Customers What They WantAnd Need"
1981	WPPSS			Senate Report: Total Costs WNP's 1 Through 5
1981	WWP	IPUC	U-1008-155	Review WNP & Skagit as Relates to WWP
1982	CEC	CEC	OII-2	Recommendations and Conclusion on PURPA
1982	CEC	CEC	OII-2	Ratepayer View on Avoided Cost (PURPA)
1982	WWP	WUTC	U-82-10	Review WWP Costs Study
1982	BPA	BPA		Low Density Discounts
1983	MTP	MPSC	83.9.67	Cost Effectiveness of Colstrip 3 to Ratepayer
1983	PPW	WUTC	U-83-57	Colstrip & PP&L Review Blk Hills Colstrip Cost Exhibit
1983	PSD	WUTC	U-83-54	Review Rate Design
1983	WPPSS		394	Draft Cost Effectiveness Study of WNP 2&3
1983	WPPSS			WNP3 Cost of Completion & Operation to NCAC
1983	WPPSS	T.TTTTC	TT 02 06	"WNP 3, Where Now?"
1983	WWP	WUTC	U-83-26	Cost of Colstrip 4, WWP Rate of Return, AFUDC, Power Supply Costs
1983	WWP	IPUC	U-1008-204	WNP3 Cost Povious Calatrin 354 Costs Pote of Potents on WNP 3 Power Cumply Costs
1983 1984	WWP PSD	IPUC	U-1008-185 U-84-27/44	Review Colstrip 3&4 Costs, Rate of Return on WNP 3, Power Supply Costs CWIP
1984	PSD	WUTC WUTC	U-84-27/44 U-84-61	Review Secondary Power Purchases & Sales
1984	WPPSS	NCAC	0-04-01	WNP 1&3 Cost Alternatives
1984	WWP	WUTC	U-84-28	Power Supply Costs, Lobbying Costs, Kettle Falls Rates
1985	PGN	OPUC	UE-44	Rate Design For Residential Users
1985	WWP	IPUC	U-1008-204	WNP3 Cost Rebuttal
1985	WWP	WUTC	U-85-36	Cost of Service Analysis, Rebuttal to Schoenbeck
1986	AZP	ACC	U134585156	Cost of Service, Rate Design, Load/Resource Balance
1986	CGC	WUTC	U-86-100	Revenue Requirements, Cost of Service
1986	PGN	OPUC	UE-48	WPPSS Investments, Property Transfers
1986	PPW	WUTC	U-86-02	Skagit, Pebble Springs, Cost of Service, Rate Design
1986	PSD	WUTC	U-85-53	Conservation Program Cost of Service/Rate Design
1986	SNO	SNOPUD		WNP 1 & 3 In A Rapidly changing environment"
1986	WECO	WUTC	U-86-117	Cost of Service, Rate Design
1986	WPPSS			Power Cost of WNP 2
1986	WWP	IPUC	U-1008-204	Surrebuttal
1987	AZP	ACC	U-1345-85367	Review AZP Cost of Service & Rate Design
1987	PSD	WUTC	U-86-131	BPA Settlement Exchange Agreement
1987	PSD	WUTC	U-87-1262	ECAC
1987	NIGAS	ICC	87-0032	Cost of Service
1987	SALEM	SALEM	06 5504	Cost of Service/Rate Design
1987	WDW	9TH	86-7704	Cost Effectiveness of Third AC Intertie
1988	PP&L	WUTC	U-87-1513	Residential Rate Design
1988	CWE	ICC	87-0427	Cost of Service/Rate Design
1988 1988	WWP WWP	WUTC WUTC	87-1532-T	Gas Transportation Rates Natural Gas General Rate Increase
1988	IP	ICC	88-2380-T 87-0695	Cost of Service/Rate Design
1988	SALEM	SALEM	07-0093	Large Industrial Rate Study
1988	WWP	WUTC	88-2363-P	Power Cost Adjustment
1988	PUGET	WUTC	88-2010-T	Energy Cost Adjustment
1989	MASON	MASON	55 Z010-1	Service Extension Policy Analysis
1989	PUGET	WUTC	81-41-RE	Energy Cost Adjustment Reopening
1989	PUGET	WUTC	89-2862-T	Energy Cost Adjustment
1989	PUGET	WUTC	89-2688-T	General Rate Increase - WPPSS #3 - Cost of Service/Rate Design
1989	WWP	WUTC	U-89-3105-T	Interstate Cost Allocation/Excess Capacity

EXPERT TESTIMONY AND ENERGY/UTILITY RESEARCH BY JIM LAZAR

YEAR	ORG	FORUM	CASE #	TOPIC/TITLE
1990	WWP	WUTC	UG-900190	General Rate Increase - Cost of Service/Rate Design
1990	IP	ICC	90-0072	General Rate Increase - Cost of Service/Rate Design
1990	WECO	WUTC	UG-900210	Gas Transportation Rates
1991	PUGET	WUTC	UE-910689	Least Cost Planning Performance
1991	WPPSS	MASON		WNP 2 Revenues & Cost of Power
1991	WPPSS	MASON		WNP 1&3 Issues & Concerns
1991	PUGET	WUTC	UE-901183	Decoupling; Power Supply Cost Recovery
1991	GRANT	FERC	E-9569	Cost Impact of Fish Bypass Systems
1991	AZP	ACC	U-1345-90007	Cost of Service/Rate Design
1992	HECO	HPUC	6998	Cost of Service/Rate Design
1992	HELCO	HPUC	6999	Cost of Service/Rate Design
1992	KE	HPUC	7003	Cost of Service/Rate Design
1992	CGC	WUTC	UG-920062	Gas Tracker
1992	PSD	WUTC	UE-920630	Periodic Rate Adjustment Mechanism
1993	PSD	WUTC	UE-920499	Cost of Service / Rate Design
1993	HECO	HPUC	7310	Avoided Costs of Generation
1993	BPA	BPA	WP-93	Rate Design
1994	BCG	BCUC	IRP	Integrated Resource Planning / Decoupling
1994	WNG	WUTC	UG-931405	Gas Revenue Requirements
1995	BCEC	BCUC		Electric Utility Industry Structure
1995	MECO	HPUC	94-0345	Cost Allocation / Rate Design
1995	GASCO	HPUC	94-0307	Gas Supply; Cost of Service; Rate Design
1996	MECO	HPUC	96-0040	Cost Allocation / Rate Design
1996	BCG	BCUC		Shareholder Incentives
1996	PSD	WUTC	UE-960299	Special Contract
1996	PSD	WUTC	UE-960195	Merger, Puget Sound Power and Light / Washington Natural GAs
1997	BCG	BCUC		Southern Crossing Pipeline Economics
1998	MECO	HPUC	97-0346	Cost of Service and Rate Design
1999	PSD	WUTC	UE-990267	Colstrip Sale and Accounting Treatment
1999	WPPSS	EFSEC		WNP-4 Site Restoration Options
1999	PSD/WW		UE-991255	Centralia Sale and Accounting Treatment
2000	Avista		UE-991606	Revenue Requirement; Rate Spread; Rate Design
2000	NWNG	WUTC	UG-000073	Revenue Requirement; Rate Spread; Rate Design
2000	Sumas	EFSEC	99-01	Recommendations on Site Certification Application
2000	PSE	WUTC	UE-001952	Industrial Market-Based Rates
2001	Sumas	EFSEC	99-01	Recommendations on Revised Application
2002	PSE	WUTC	UE-011411	Merger Compliance Rate Filing
2002	PSE	WUTC	UE-011570	General Rate Proceeding
2003	MH	MPUB		Residential Rate Design

ACRONYMS

ACC ARIZONA CORPORATION COMMISSION

ANGU ASSOCIATION OF NORTHWEST GAS UTILITIES

ARIZONA PUBLIC SERVICE COMPANY AZP BCEC British Columbia Energy Coalition BCG BRITISH COLUMBIA GAS UTILITIES LTD. BCUC BRITISH COLUMBIA UTILITIES COMMISSION

BEL City of Bellevue, Washington BPA BONNEVILLE POWER ADMINISTRATION

CBFWA COLUMBIA BASIN FISH AND WILDLIFE AUTHORITY

GRANT GRANT COUNTY PUBLIC UTILITY DISTRICT GRAY GRAYS HARBOR PUBLIC UTILITY DISTRICT

HECO HAWAIIAN ELECTRIC COMPANY HAWAII ELECTRIC LIGHT COMPANY HELCO HAWAII PUBLIC UTILITY COMMISSION HPUC ILLINOIS COMMERCE COMMISSION ICC

ΙP ILLINOIS POWER COMPANY

IPUC IDAHO PUBLIC UTILITIES COMMISSION

KAUAI ELECTRIC KE

PUBLIC UTILITY DISTRICT #3 OF MASON COUNTY, WASHINGTON MASON

MTP MONTANA POWER COMPANY

NORTHERN ILLINOIS GAS SERVICE
NATIONAL MARINE FISHERIES SERVICE NIGAS NMFS

ATOMIC SAFETY AND LICENSING BOARD/NUCLEAR REGULATORY COMMISSION NRC.

PUBLIC UTILITY COMMISSION OF OREGON PORTLAND GENERAL ELECTRIC COMPANY OPUC PGN PPW PACIFIC POWER AND LIGHT COMPANY PUGET SOUND POWER AND LIGHT COMPANY PSD

SALEM ELECTRIC COOPERATIVE SALEM SAUDER SAUDER INDUSTRIES, LTD. [CANADA]

SEATTLE CITY LIGHT SENATE WASHINGTON STATE SENATE

SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT SNOPUD

Sumas Energy Corporation
THERMAL REDUCTION, INC.
OREGON TRAILS ELECTRIC COOPERATIVE
COLUMBIA RIVER INTERTRIBAL FISH COMMISSION Sumas Energy Corporation Sumas THERM

TRAILS

TRIBE

WDW WASHINGTON DEPARTMENT OF WILDLIFE WECO WASHINGTON NATURAL GAS COMPANY

WPPSS WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WUTC WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WWP WASHINGTON WATER POWER COMPANY

NOTE: LIST DOES NOT INCLUDE LITIGATION ASSISTANCE