

Alvin S. Pak
Attorney at Law

PROFESSIONAL EXPERIENCE

LAW OFFICES OF ALVIN S. PAK.
August 2014 to Present

Private practice providing legal and regulatory counsel to select clients. Responsible for representing clients in regulatory litigation before the Federal Energy Regulatory Commission, the California Public Utilities Commission, the Public Utilities Commission of Nevada, the Oregon Public Utility Commission, and other agencies in matters related to wholesale and retail rates, environmental and regulatory compliance, facility permitting, and competitive energy services.

SEMPRA ENERGY CORPORATION.
Senior Federal Regulatory Counsel, Sempra Law Department,
July 2008 to August 2014
Present.

Senior attorney providing legal, business and regulatory counsel to major electric and gas utility company. Responsible for representing client organizations in regulatory litigation before the Federal Energy Regulatory Commission and California Public Utilities Commission, including matters related to wholesale and retail rates, federal smart-grid policy, California ISO market structure, and regional and subregional transmission planning. Chairman of Legal Committee of California Transmission Planning Group, a California nonprofit association organized by California transmission owners and service providers for the purposes of complying with Orders 890 and 1000 of the Federal Energy Regulatory Commission.

SEMPRA GLOBAL ENTERPRISES.
Director, Global Enterprises Regulatory Affairs,
April 2002 to July 2008.

Director of regulatory and legislative analysis department providing business and regulatory counsel to diverse group of domestic and foreign-based enterprises (power plant and natural gas infrastructure development and operation, wholesale and retail energy marketing and trading, and communications). Responsible for managing regulatory litigation, analyzing regulatory and legislative matters of interest to executive management and project leadership teams, and providing legal, regulatory, political, economic, and market assessments relevant to general and specific issues related to

corporate and subsidiary strategies, initiatives and operations. Representative projects include:

- Development, coordination and implementation of regulatory rules and market structure facilitating delivery of liquefied natural gas into California natural gas markets.
- Development, coordination and negotiation of corporate positions related to rates, rules and regulations of regional transmission organizations and transmission system operators, including California PUC and ISO, Midwest ISO, PJM Interconnection, ISO New England, New York ISO, ERCOT, and GridWest.
- Representation before California Energy Commission re public policy initiatives and annual statewide energy-planning process.
- Expert testimony on behalf of retail service provider in licensing application pending before the Arizona Corporations Commission.
- Expert testimony on behalf of Northwest Independent Power Producers Coalition before Oregon Public Utilities Commission, Michigan Public Service Commission, Maryland Public Service Commission, Washington Utilities & Transportation Commission, and Utah Public Service Commission re structure of wholesale power market and implementation of long-term resource planning.
- Regulatory risk and approvals analysis of proposed mergers and acquisitions in corporate due diligence reviews.

JEFFER, MANGELS, BUTLER & MARMARO LLP.
Practice Leader, Energy and Regulatory Practice Area,
December 2000 to March 2002.

Energy-sector and regulatory practice leader managing lawyers providing business and legal counsel to parties with interests in the western region power markets, and representation of clients before the California State Legislature, the California Public Utilities Commission, the California Energy Commission and related state, regional and federal agencies. Clients included, among others, power marketers, retail energy service providers, large commercial and industrial energy consumers, public agencies with interest in development of California power markets, and technology developers entering electricity and natural gas markets. Representative engagements include:

- Consultant to major metropolitan city evaluating cash-flow and revenue impacts to water and power operations implicated by proposed secession by various local community groups.
- Representation of Mitsubishi Energy Trading Corporation, a major multinational corporation in development phase of new LNG infrastructure project in Southern California.
- Counsel to emerging independent power producer and project developer.
- Preparation of successful contract proposals by Internet application service provider to implement demand-reduction auctions in service areas of Sacramento Municipal Utility District and San Diego Gas & Electric Company.

- Representation of City of Huntington Beach, California, a municipality-intervenor in siting matter before the California Energy Commission (resulting in unprecedented requirement that developer execute an inframarket power contract with the State of California as a condition of site permit).
- Representation of Cities of Los Angeles, Palos Verdes, Long Beach, and Pasadena in interruptible-programs proceeding before the California Public Utilities Commission resulting in waiver of rate penalties and unique requirement that serving utility provide detailed advance notice to client regarding location and timing of rotating electricity outages.
- Counsel to large commercial and industrial customers in evaluating strategies for reducing energy costs and vulnerability to forced electricity outages.
- Management consultant providing assessment of strategic plans and initiatives for start-up Internet power trader and energy-service provider based in Philadelphia, Pennsylvania.
- Representation of large commercial and industrial customers in negotiation of power and gas contracts between and energy service providers under California direct-access rules.

R.J. RUDDEN ASSOCIATES, INC.
Principal Consultant,
June 2000 to December 2000.

Consultant providing legal and related professional services related to state and federal energy regulation. Services provided as a senior associate to R.J. Rudden Associates, a subsidiary of Black & Veatch based in Hauppauge, New York, providing management and strategic consulting services to firms in the international energy industries. Assignments included development of policy positions favoring supporting demand-response protocols in emerging competitive market structures for retail electricity, analysis of Internet-based joint-venture power-marketing initiative between major U.S. utility and insurance companies, economic analysis of privatization proposal for major municipal electric utility, and corporate strategy analysis for foreign utility anticipating adoption of restructured regulatory environment in the United States.

ElectricWindow.Com, INC.
Vice President, Corporate Development, and Chief Operating Officer,
October 1998 to May 2000.

Chief operating officer for Internet vertical portal development firm. Responsible for corporate and business planning, budgeting, staffing and operational oversight of a multifunctional web site serving the practitioner communities within the international energy and electricity industries. Managed functions included strategic planning, finance and administration, practitioner community development, sales, marketing, public relations, investor relations, and product and content development.

ELECTRIC POWER RESEARCH INSTITUTE.
Director, Corporate Development, Office of the President,
July 1996 to October 1998.

Director of strategic planning and business development for the largest U.S. nonprofit scientific and technological research and development consortium. Reported to the President of the Institute and held responsibility for leading and coordinating senior executive planning activities related to corporate development -- directly developed and presented current seven-year business plan and organizational structure. Also held executive responsibility for new business development related to public-sector research and development, directing legislative activities and project proposals related to multi-million dollar projects and public grants and contracts. Served as Senior Counsel, Regulatory Relations, representing the Institute before relevant state and federal energy regulatory agencies. Member of Institute Executive Leadership Team and senior management staff.

ENOVA TECHNOLOGIES, INC.
Vice President, Development,
September 1995 to February 1996.

Operations officer and member of the Board of Directors of venture-capital firm specializing in the marketing and commercialization of emerging energy-related technologies, products and services. Principal author of Enova Technologies conceptual business design and business plan, and responsible for overseeing and managing the firm's incorporation and formation. Responsible for the development and execution of market analysis and product line business plans, including formation of alliances, joint ventures, partnerships, franchises and ownership syndication strategies related to five diverse emerging technologies, ranging from traditional utility technologies to wireline-based electronic-commerce appliance to fabrication of high-strength construction components from composite materials.

SAN DIEGO GAS & ELECTRIC COMPANY.
Group Manager, Strategic Plans & Projects,
January 1993 to September 1995; February 1996 to July 1996.

Director of Technology & Product Development Group (corporate research and development function with annual budget of \$44.7 million) and Co-Director of the New Business Development Group. Additional temporary assignments during this period included Project Manager, Corporate Strategic Planning Project (responsible for selecting and managing multidisciplinary internal team and outside management consultant; managing the development of financial models and analyses and preparation

and approval of economic and regulatory forecasts affecting candidate strategies; and presenting recommendations to senior management and Board of Directors -- project resulted in approval by Board of Directors of ten-year corporate strategy); and Team Leader, Alternative Industry Models Project (serving as principal policy analyst and overseeing development of economic and financial analyses related to various alternative corporate and industry structural models presented to senior management, Board of Directors and state regulatory agencies). During second tenure in position (1996), responsible for "advance guard" regulatory interventions submitted in fourteen state electricity-industry restructuring proceedings on behalf of parent Enova Corporation and affiliate Enova Energy Services.

**SAN DIEGO GAS & ELECTRIC COMPANY.
Regulatory Policy Director and Counsel,
January 1987 to January 1993.**

Manager of the San Francisco Regulatory Affairs Office. Served as Principal Author, Policy Witness and Project Manager of Performance-Based Ratemaking Project (project resulted in reform of century-old regulatory procedures governing the operations and oversight of California energy utilities and personal recognition as the inaugural recipient of The President's Award for Extraordinary Achievement). General duties included coordination of regulatory litigation before state and federal regulatory agencies; formal and informal representation of the company and industry before state and federal legislative bodies; providing regulatory, political and legal advice to senior management officials and Board of Directors; reporting and analyzing regulatory and political events and trends of interest to the company and the news media; managing the budget, operations and physical plant of the company's San Francisco Office; and appearing as regulatory trial counsel before the California Public Utilities Commission.

**OFFICE OF PUBLIC UTILITIES COMMISSIONERS VICTOR CALVO and DONALD VIAL.
Counsel and Senior Aide to the Commissioner,
January 1984 to July 1986.**

Principal aide and advisor to Commissioners of the Public Utilities Commission of the State of California. Served as Principal Author of California decisions implementing the divestiture of Pacific Bell from AT&T and adoption of competitive intrastate long-distance telecommunications service (1984), deregulating intrastate for-hire common carrier trucking (1985), reviewing reasonableness of costs of construction of San Onofre Nuclear Generating Stations Units 2 and 3 and Helms Creek Pumped Storage Facility, and addressing first interLATA general rate case of AT&T of California (1986). General duties included the review and analysis of formal and informal matters requiring the Commissioners' attention and/or signature; the drafting and preparation of orders, opinions, decisions and speeches on behalf of the Commissioners and the Commission; the development of regulatory, policy and legal options concerning the economic

regulation of investor-owned public utilities; and providing general advice on all aspects of regulation and legislation, with emphasis on the legal and policy implications of Commission actions regarding the major energy, telecommunications and transportation utilities in the State of California.

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA.
Staff Attorney and Trial Counsel,
September 1978 to December 1983.**

Trial lawyer and appellate counsel in the Legal Division of the California Public Utilities Commission. Duties included acting as trial counsel in regulatory proceedings before administrative agencies, primarily involving the rate and siting applications of the State's major public utility corporations; preparation and presentation of showings on behalf of the agency's expert staff; cross-examination of opposing expert witnesses in diverse disciplines (e.g., economics, finance, engineering, taxation, energy policy and telecommunications policy); drafting of pleadings, motions and briefs; representation of Commission during administrative and judicial review; providing legal advice to the Commissioners, agency staff and the public as to regulatory issues; and training new agency lawyers and witnesses in trial procedures and strategies.

PROFESSIONAL ORGANIZATIONS AND AFFILIATIONS

Member, State Bar of California.

Member, Federal Energy Bar Association.

Chairman, California Transmission Planning Group Legal Committee, 2009 to 2012.

Member, California Conference of Public Utility Counsel, 2006 to 2014.

Member, Executive Board, Northwest Independent Power Producers, 2002 to 2006.

Member, Regulatory Committee, Independent Energy Producers Association, 2002 to 2008.

Chairman and Member, Board of Directors, Western Power Trading Forum, 2004 to 2006.

Member, Board of Directors, Apogee Interactive, Inc., 2000 to 2003.

Member, Policy Board of Directors, California Foundation on the Economy and the Environment, 1988 to 1993.

Member and Chair, California Utility Research Council, 1993 to 1996.

Member of the Board of Directors of KABL Radio San Francisco, 1984 to 1993.

EDUCATIONAL BACKGROUND

Juris Doctor, University of San Francisco School of Law, 1978.

Bachelor of Arts, University of California Berkeley, 1975.

PUBLICATIONS

Gehl, Dr. Stephen L., Dr. Gail McCarthy and Alvin S. Pak, "Industry Roadmaps for Technical Innovation," Trends in Industrial Innovation, Sigma Xi Scientific Research Society; Baltimore, Maryland; November 1997.

Pak, Alvin S., "Electricity-Industry Restructuring and Research: A View to the Horizon," EPRI Technology Delivery; San Francisco, California; June 1997.

Pak, Alvin S., "Restructuring in the U.S. Electricity Industry," Electricity: 1997 Annual Report, Canadian Electrical Association; Vancouver, British Columbia; April 1997.

Pak, Alvin S., "The Emerging Market for Distributed Resources: Assessment of Regulatory Trends," EPRI Distributed Resources Manual; Vancouver, British Columbia; November 1996.

Pak, Alvin S., "Performance-Based Regulation: Regulatory Reform for Energy Utilities," TRADE Performance Indicators, United States Department of Energy; Baltimore, Maryland, May 1995.

Pak, Alvin S., "Performance-Based Ratemaking: The San Diego Gas & Electric Experiment," Carrots & Sticks Incentive Regulation Conference Proceedings, University of Illinois Press; Chicago, Illinois; April 1994.

Pak, Alvin S. and George Liparidis, "Get Ready for the Newest Competitor: The Vertically Integrated Utility," Electricity Journal, Volume 6, No. 3; Seattle, Washington; April 1993.

Pak, Alvin S., "Performance-Based Regulation: Jump-Starting the Era of Shared Purpose," Electricity Journal, Volume 5, No. 10; Seattle, Washington; December 1992.

Pak, Alvin S. and Lisa J. Hubbard, "Fourth-Level Integration: Regulatory Challenges and Opportunities in Demandside Management," Demandside Management Challenges, Canadian Electrical Association; Toronto, Canada; October 1990.