

MICHAEL B. ROSENZWEIG

Dr. Rosenzweig currently is an affiliate of Infrastructure Economic Consulting, LLC. He is an expert in the areas of finance, regulation, and electricity markets. He specializes in restructuring, regulation, and privatization of state-owned utilities, and regulation of electric utilities. He provides strategic advice to utilities, independent power producers and customers on issues related to the design and implementation of purchase and supply contracts. Other areas of focus include transmission pricing and access, strategic planning for utilities, power market rules, ancillary services, and tariffs.

Dr. Rosenzweig has directed projects addressing strategic issues related to bulk power market competition, power, water and gas contracts, transmission access, pricing, and restructuring. He has worked in India, Latin America, Eastern Europe, and the US. He has testified before international arbitration tribunals, US District Court, the Federal Energy Regulatory Commission (FERC), Congress, the International Chamber of Commerce (ICC), and local regulatory bodies. He served as an arbitrator in a dispute between two US utilities over a transmission interconnection dispute. While at the FERC he mediated a contract dispute between a utility and its wholesale customers.

Dr. Rosenzweig has served as an expert witness in several international arbitration proceedings. On behalf of PSEG Global Inc., The North American Coal Corporation, and Konya Ilgin Elektrik Uretim Ve Ticaret Limited Sirketi, he provided expert reports in their proceeding against the Republic of Turkey before ICSID regarding the cancelled BOT power project in Konya Ilgin, describing the economic structure of the project including related contracts and analyzing the costs incurred in its implementation. On behalf of the Government of the Republic of the Philippines, he submitted expert reports assessing from an economic perspective the issues raised by the claimants Fraport and PIATCO in their proceedings regarding the Nimoy Aquino International Airport before the tribunals of both ICSID and the ICC. On behalf of the AES Corporation, Jyoti Structures, Ltd., and AES Orissa Distribution Private, Ltd., he provided an expert report assessing from an economic and regulatory perspective issues raised in the arbitration with Grid Corporation of Orissa, Ltd. under the Indian Arbitration and Conciliation Act. On behalf of Izmit Su, A.S. Izmit Su, A.S., he provided expert testimony on the appropriate economic and regulatory principles applicable to a BOT investment in a water utility in Turkey before the International Arbitral Centre of the Austrian Federal Economic Chamber. In addition, Dr. Rosenzweig provided expert testimony before the International Arbitral Center of the Austrian Federal Economic Chamber on applicable compensation and damages issues on behalf of the government of Uzbekistan in the case of ROZ Trading Ltd. v. The Coca-Cola Export Corporation, The Republic of Uzbekistan, and OziqOvQatSanoat (also known as Uzpishcheprom). He also testified before the ICSID in the case of Aguaytia Energy, LLC v. the Republic of Peru on behalf of the Republic and providing expert testimony on comparative electric utility regulatory systems, industry practice regarding electric sector concessions, applicable compensation and damages issues on behalf of the Government of Perú. For a confidential client, Dr. Rosenzweig provided expert witness testimony in a breach of a concession contract for electricity distribution service dispute. He addressed liability and damages issues for the Respondent. The details are confidential. He provided technical support on the nature of the concession regime in Peru, the importance of contracting in modern economies and assessed the damages arguments presented by Claimant. He has also testified on behalf of AEI Asia Limited in a proceeding before a tribunal of the Singapore International Arbitration Center addressing the damages suffered as a result of a defective power plant/desalination

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cogeneration project that had been sold to AEI by a private developer. Dr. Rosenzweig provided an expert report and testimony in the case of Caravelí Cotaruse Transmisora de Energía S.A.C - CCTE v Government of the Republic of Peru before the ICSID. In addition, he provided consulting expertise and expert testimony involving economic/commercial contract interpretation related to a request for modification of the contract terms defining the royalty calculations of a hydrocarbon exploitation concession contract in Perú. Also, he provided consulting expertise and expert testimony regarding an alleged breach of the NAFTA treaty related to a discrimination Claim involving the self-generation requirements of co-generation pulp mills in British Columbia, Canada.

Education

University of Maryland

Ph.D. Applied Mathematics, 1970 M.B.A., Operations Research, 1973 B.S., Mathematics, 1965

Professional Experience

Infrastructure Economic Consulting, LLC, Washington DC

2018- present Affiliate

Senior advisor in international arbitrations matters and utility regulation. He specializes in restructuring, regulation, and privatization of state-owned utilities, and regulation of electric utilities. He provides strategic advice to utilities, independent power producers and customers on issues related to the design and implementation of purchase and supply contracts. Other areas of focus include transmission pricing and access, strategic planning for utilities, power market rules, ancillary services, and tariffs.

NERA Economic Consulting, Washington, DC

- 2009- Special Consultant
- 1998-2009 Senior Vice President and Chair of the Energy, Environment, and Network Industries (EEN) Practice
- 1987-1998 Vice President

Expert on electricity industry regulation and structure, working both in the evolving US power industry and on international projects. Experience includes significant involvement in financial assessments of power sector assets and related contracting issues including development of PPAs and concession agreements. He was an arbitrator in a dispute between two utilities in the US Southwest over the effects of the addition of a transmission line to an existing grid and associated tariffs. Dr. Rosenzweig has served as an expert witness in several international arbitration proceedings.

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Dr. Rosenzweig has been involved with projects dealing with regulation, restructuring, and privatization of state-owned utilities in a variety of different settings, including India, Brazil, Cameroon, Dominican Republic, El Salvador, Argentina, Venezuela, and Eastern Europe. Has extensive project management and implementation experience.

Utility Strategies, Inc., Washington, DC

1983-1987 President and Co-founder

Assisted two utilities in the development of comments responding to the FERC Notice of Inquiry (NOI) on Regulation of Electricity Sales-for-Resale and Transmission Service. Provided the Baltimore Gas and Electric Company advice in designing and obtaining regulatory approval for an auction mechanism to set prices for transmission service and presented supporting testimony. Provided testimony to the FERC on behalf of Pacific Power and Light Company regarding the competitive effects of transmission access and pricing policies in the context of a transmission rate dispute. Participated in a client study evaluating the costs and benefits of the South Texas Nuclear Project. Provided analytical support to the Bonneville Power Administration in defense of their decision to defer completion of the WPPSS-3 nuclear unit. In addition, directed a research effort for the Edison Electric Institute investigating the standards for and application of the standards for prudence in regulatory forums. Developed a conceptual analysis of bulk power marketing issues and carried out an associated marketing survey for a private utility.

Federal Energy Regulatory Commission (FERC), Washington, DC

1981-1983 Technical Advisor to Commissioner J. David Hughes

Participated in a number of Commission initiatives dealing with electric utility regulation. Had a leading role in the development of the FERC Bulk Power Market Experiment Program which led to the development of the WSPP. Participated in the development of Commission policies in the areas of hydropower plant re-licensing standards (Merwin Dam case), marginal cost pricing at wholesale (WEPCO case), treatment of purchased power costs (RM83-62), and inclusion of CWIP in rate base (RM81 38). In addition, he mediated an interconnection and transmission contract settlement between a major investor-owned utility and its wholesale customers.

Energy Management Associates, Inc., **Atlanta, Georgia** Director of Rates and Litigation

Directed studies related to economic and regulatory issues. Led a market penetration study for a synthetic boiler fuel oil for a private client. For a client involved in damages litigation, prepared an analysis to compute the replacement power costs resulting from a boiler implosion at a utility generating station. Supported the efforts of a utility to model the feasibility of introducing Ocean Thermal Energy Conversion technology into their system. In addition, participated in the development of a computer-based model for "screening" utility system expansion and operation alternatives.



US Department of Energy (DOE), Washington, DC

1978-1979 Senior Technical Analyst, Regulatory Intervention Division

Expert witness, economic analysis, and system planning. Dr. Rosenzweig presented expert witness testimony regarding the impact of coal tariffs on national energy policy at the Interstate Commerce Commission (Ex-Parte 347, Western Coal Investigation--Guidelines for Railroad Rate Structure; Docket 37063, Increased Rates on Coal--L&N Railroad). He evaluated the effect upon system plans of proposed increase in railroad tariffs for hauling coal. Houston Lighting and Power and Florida Power Corporation were studied. The analyses modeled the effects of a proposed increase in rail tariffs on the economics of adding coal-fired generation to a utility's resource mix.

1977-1978 Division Chief, Electric Power Analysis Division

Managed a staff of five professionals engaged in data base and model development and in analyzing policy issues involving electric power. Functional areas of involvement included demand forecasting, supply reliability, utility financial requirements, and regulatory impacts.

Federal Energy Administration, Washington, DC

1976-1977 Senior Analyst

Developed data bases and models and analyzed policy issues involving electric power in the areas of reliability, regulation, and financial requirements. Also, a member of the White House Coal Strike Task Force.

National Aeronautics and Space Administration (NASA), Greenbelt, Maryland

1974-1976 Head of Operations Research Branch

Applied operations research techniques to management issues. Also participated in a costbenefit analysis leading to the development of the LANDSAT series of earth-sensing satellites.

Lulejian & Associates, Inc., Arlington, VA

1973-1974 Operations Research Analyst

Analyzed issues related to the military and defense. Developed a statistical analysis to evaluate the vulnerability of high-value naval targets to satellite surveillance. Also estimated the survivability of advanced low-level bombers during penetration of Soviet air-defense systems.

United States Naval Academy, Annapolis, Maryland

1968-1973 Assistant Professor, Mathematics