

JILL S. TIETJEN

An electrical engineer experienced in electric utility and related planning processes and analyses, primarily in the areas of generation, transmission, and fuels. Experienced expert witness.

EMPLOYMENT CHRONOLOGY

1997-present	Technically Speaking, Inc., President and CEO
2001-present	University of Colorado at Boulder, Various Titles
2003-2005	Senior Management Consultant, R.W. Beck
2001-2008	Senior Engineer, McNeil Technologies
1997-2000	University of Colorado at Boulder Director, Women in Engineering Program and Independent Consultant
1995-1997	Stone & Webster Management Consultants, Inc. Assistant Vice President
1992-1995	Principal, Hagler Bailly Consulting (Previously RCG/Hagler Bailly) Boulder, Colorado
1984-1992	Stone & Webster Management Consultants, Inc. Assistant Vice President
1981-1984	Mobil Oil Corporation Planning Analyst, Mining and Coal Division
1976-1981	Duke Power Company Planning Engineer

CONSULTING ASSIGNMENTS

Clean Air

Examined the process used by Big Rivers Electric Corporation to determine that a scrubber should be installed at Henderson Station Two. Presented testimony on the proposed environmental surcharge before the Kentucky Public Service Commission.

Prepared acid rain workshops for company's Utility Management Development Program. Analyzed coal price projections associated with acid rain compliance plans for Illinois Power and the Allegheny Power System. Authored papers on impacts of acid rain legislation.

Cogeneration/Independent Power Production

Managed several projects relating to the efficiency of qualified facilities. One project involved preparation of an affidavit in a Federal Energy Regulatory Commission hearing. Managed an appraisal of an IPP in bankruptcy.

Evaluated fuel contracts - primarily coal and petroleum coke - associated with cogeneration projects in various states. Evaluated steam and power sales contracts as well as operational aspects, avoided cost projections, and transmission issues of projects. Prepared feasibility studies and financial viability analysis.

Assisted Public Service Company of Colorado evaluate the options available with regard to the possible repowering/conversion of the Fort St. Vrain nuclear power plant. Assistance included solicitation and evaluation of potential bidders and preparation of request for proposal.

Competitive Bidding

Managed competitive bidding solicitations for supply-side and/or renewable resources. Projects included RFP and PPA development and evaluations of bids. Clients: Northern States Power; The Empire District Electric Company; San Diego Gas & Electric; SaskPower; Southwestern Public Service; and Cheyenne Light, Fuel & Power. Independent Evaluator for Southern California Edison and Pacific Gas & Electric RFOs.

Economic Analysis

Investigated the competitive market price for the sale of power from coal-fired, geothermal, and hydroelectric power plants. Performed earnings value evaluations for appraisal evaluations.

Projected levelized annual costs for generating units planned for construction. Analysis included evaluation of fuel costs (including both mine and transportation components), escalation rates, operating and maintenance costs, levelizing factors and appropriate capacity factors.

Expert Testimony

Ms. Tietjen has prepared testimony or affidavits for cases before the Federal Energy Regulatory Commission and before regulatory agencies in the states of Colorado, Illinois, Kansas, Kentucky, Maine, Missouri, Ohio, South Dakota, and Wyoming. Topics have included fuel procurement practices, policies, and procedures; integrated resource planning; nonutility generation markets; economic dispatch practices; avoided costs; fuel and purchased power expenses; and electric system reliability.

Fuels

Assessed market potential for international coals to various destinations including Egypt and South America. Reviewed the economics of several Australian coals for a power plant in South Australia. Analysis included lignite, subbituminous and bituminous coals under various environmental scenarios.

Analyzed projected fuel costs, supply and availability for coal-fired power plants. Evaluated coal contracts and prepared market assessments.

Generation Planning

Evaluated capacity planning alternatives using several models.

Performed production costing and generation expansion modeling for a wide range of domestic and international utilities.

As project manager, developed and applied a decision methodology to evaluate plant life management option decisions for the gas and oil-fired units in California for the California Energy Commission.

Integrated Resource Planning

Project manager of integrated resource planning studies for Bangor Hydro-Electric, Black Hills Power and Light, Cheyenne Light, Fuel and Power, Black Hills Colorado Electric and the Empire District Electric Company. Efforts supported with testimony filed in multiple jurisdictions. Authored Integrated Resource Plans for Black Hills Corporation (2005, 2007, 2008, 2011, 2012) and The Empire District Electric Company (2006, 2007, 2010).

Management Audits

Managed fuel practices and policies audits of utilities. Participated in a management audit investigating issues of generation planning. Participated in evaluations of system dispatch practices and procedures.

Mergers/Acquisitions

Evaluated impacts of a proposed merger and later a proposed acquisition for Tri-State Generation and Transmission and Colorado-Ute Electric Association. Areas examined included production costs, power purchases, power sales, and fuel contracts.

Power Pooling

Evaluated power pooling costs and benefits for utilities in Indiana and Ohio. Analysis included centralized dispatch, energy brokering system, and economy interchanges. Examined spinning reserve requirements and fuel impacts of pooling operation.

Pre-Audit Counsel

Helped utilities prepare to undergo management audits. Areas assisted include fuels, purchasing, power production, environmental affairs, gas supply and planning. Assisted in interview training.

Ratemaking Principles

Served as advisor to the Iowa Utilities Board on a priori ratemaking principles for utility construction of electric power generation in Iowa.

Renewable Resources

Served as project manager for assessment of alternative wind technologies for a Midwestern utility. Examined the feasibility and economics of biomass generation for a sawmill in Wyoming, an electric utility in Arizona, a reservation in Minnesota, and a public utilities district in California.

Transmission Planning

Identified potential transmission corridor development in California. Examined related environmental issues. Established an advisory committee composed of utilities, federal and state agencies and special interest groups to facilitate transmission line planning. Evaluated bulk power transmission system issues in California. Examined impacts of Qualifying Facility development in certain areas of the Pacific Gas and Electric and Southern California Edison systems.

Examined the impacts of regional operation on Iowa Power's transmission system. Analyzed associated transmission issues including some MAPP proposals. ENEREX operation and the condition of the Company's 161-kV system.

Participated in audits of transmission and distribution loss calculation practices for Northern States Power and Alberta Power Limited.

Other

Project manager and expert witness for a proceeding in Illinois with regard to a reliability rule proposed by the staff of the Illinois Commerce Commission.

UTILITY BACKGROUND

System Planning

Conducted generation planning studies including production costing and capacity mix analyses using modern computerized planning tools including. Investigated alternative and renewable technologies.

Prepared economic analyses. Examined fuel use requirements. Assisted in fuel budget preparation. Evaluated maintenance scheduling and generation dispatching practices.

Evaluated alternative load control strategies. Studies included cost/benefit analysis and simulation of strategies with examination of resultant impact on utility operations.

COAL EXPERIENCE

Fuels

Prepared competitive marketability studies of coals throughout the United States. Examined the competitiveness of U.S. coals in markets outside the country primarily the Pacific Rim and Europe as compared to Australian, South African and Canadian coals. Conducted utilization studies of coals for use in the marketing of coal to a number of U.S. utilities.

Cogeneration

Studied the feasibility of coal-fired cogeneration for enhanced oil recovery at Mobil's facilities in Kern County, California.

Economic Analysis

Assess the economics of various pricing scenarios for coal contracts. Evaluated mining costs and profitability.

OTHER

Strategic Planning

Participated in the development of the five-year strategic plan and associated budgets and justifications for an alternative energy entity.

Marketing

Participated in marketing coal from the Powder River Basin, Wyoming to a wide spectrum of utilities.

AFFILIATIONS

Society of Women Engineers — 1991-92 National President, Fellow.
Georgia Transmission Corporation, Board of Directors, 1997 – present.
Merrick & Company, Board of Directors, 2010 – present; Vice Chair – 2012 – present.
Colorado State Board of Registration for Professional Engineers and Professional Land Surveyors, 1996-2004, Chair, 2001-2003.
Institute of Electrical and Electronics Engineers, Power Engineering Society, Senior Member.
International Women’s Forum (Colorado), Board of Directors, 1998 – 2000.
Rocky Mountain Electrical League Board of Directors, 1994-2002; President, 1999-2000.
Rocky Mountain Electrical League Foundation Board of Directors, 1999-2006, Chair, 2002-2005.
Girl Scouts – Mile Hi Council Board of Directors, 1999-2007, Chair, 2003-2007.
Board of Trustees, Arapahoe Library District, 1995-2000, President, 1997 – 1999.
Women in Engineering Programs & Advocates Network - Board of Directors, 1995 – 2001.
Leadership Denver 1996.

HONORS

1990 Certificate of Honor — Colorado Engineering Council. 1991 John E. Daly Award for Consulting Excellence — Stone & Webster Management Consultants. Soroptomist International Women of Distinction Award, 1995. Woman of Distinction, Mile Hi Girl Scouts Council, 1997. IEEE *Spectrum* Advisor of the Year, 2000. Presidential Citation Award, Professional Land Surveyors of Colorado, 2000, Woman in Technology Award from the Women’s Foundation of Colorado, Subaru, and News4, 2001. Distinguished Service Award, Society of Women Engineers, 2002. Horizon Award, Outstanding Professional, The Partnership to Advance Science, Engineering, and Technology, 2003. Colorado Women’s Leadership Coalition, 2004 Woman Leader of Excellence. Virginia Engineering Foundation, 2004, Distinguished Alumni Award. Tau Beta Pi, 2004 Distinguished Alumna Award. One of 50 2004 Trendsetters, *Public Works* Magazine. University of Colorado at Boulder, Distinguished Engineering Alumni Award, 2005. University of Virginia, Distinguished Alumna, 2007. Athena Award Finalist, Colorado Women’s Chamber of Commerce, 2009 & 2010. Colorado Women’s Hall of Fame, 2010. Daughters of the American Revolution History Award Medal, 2012.

EDUCATION AND OTHER

University of Virginia, B.S., Applied Mathematics with a minor in Electrical Engineering, 1976.
(Tau Beta Pi, Virginia Alpha).
University of North Carolina at Charlotte, M.B.A., 1979.
Registered Professional Engineer, Colorado.