RICHARD LAUCKHART

J. Richard Lauckhart has 40 years of experience in power supply planning, electricity price forecasting and asset valuation. He began his career as a distribution engineer with Pacific Gas & Electric Co., and held various positions at Puget Sound Power & Light Co. (now Puget Sound Energy) in power supply planning, culminating as Vice President of Power Planning. Mr. Lauckhart took an exit package from Puget in 1996 and began a consulting career.

During the years 1996-2011 Mr. Lauckhart performed consulting assignments related to power market analyses, price forecasting services, asset market valuation, integrated resource planning, transmission line congestion analysis, and management of strategic consulting engagements for clients in North America, including investor-owned and municipal utilities, independent power producers, and lenders. This work was performed primarily through full time employment at large energy consulting companies.

Since retiring from full time work in 2011. Mr. Lauckhart has taken on some consulting assignments as a sole proprietor/self-employed consultant. Activities include:

- Wheatland wind Lauckhart and Schiffman teamed up to re-run load flow studies that were improperly performed by NorthWestern Energy in Montana. Consulting on the possibility of shutting down a nuclear plant and coal plants for a utility in Nebraska...with detailed recommendation on what to do and why.
- Consulting on the need for a transmission line proposed by Puget Sound Energy in Bellevue, Washington. This work was done for intervenors who opposed the line.
- Consulting on the need to shut down a wind plant during an extended time period of work on a transmission substation in North Dakota.
- Consulting on interconnection and transmission service cost for a solar developer in Southern California.
- Consulting for Consolidated Energy Development, Inc, the renewable development subsidiary of the
 large New York utility, Con Edison's principal business segments are Consolidated Edison Company
 of New York, a regulated electric, gas, and steam utility; Orange & Rockland Utilities (O&R), a
 regulated electric and gas utility; Con Edison Clean Energy Businesses, Inc., and Con Edison
 Transmission, Inc. Seven separate Consulting Engagements as follows:
 - 1) Present our findings in a non-binding arbitration proceeding. Dispute is continuing.
 - 2) Pondera wind...provided report to client and others regarding transmission study problems in the wind integration analysis by NorthWestern Energy and the Western Area Power Administration (WAPA). Dispute is continuing.
 - 3) Campbell County Wind Farm... provided report to client and others regarding transmission study problems in the wind integration analysis by the Southwest Power Pool (SPP). Dispute is continuing.
 - 4) Burt County Wind... provided report to client and others regarding transmission study problems in the wind integration analysis by the Midwest Independent System Operator (MISO). Dispute is continuing.

- 5) Donaldson wind... provided report to client and others regarding transmission study problems in the wind integration analysis by the Southwest Power Pool (SPP). Dispute is continuing.
- 6) CED solar project in Nevada... provided report to client and others regarding erroneous decision by NVEnergy to characterize a power line rebuild to be a Transmission Line and not a Distribution line.
- 7) The extensive NorthWestern Energy Montana FERC filing to change its OATT pricing formula in FERC Docket Number ER19-1756. Parties in FERC Complaint (including Consolidated Energy Development) held a large number of settlement discussion meetings. I testified to the problems with the NorthWestern proposal. My testimony was key in a Settlement Agreement that was approved at FERC that greatly enhanced the economics of the Consolidated Energy renewable projects under development in Montana.

Mr. Lauckhart received a Bachelor of Science degree in Electrical Engineering from Washington State University in 1971 and a Masters degree in Business Administration from the University of Washington in 1975.

Representative Project Experience

Black & Veatch

September 2008 to October 2011 Managing Director

Mr. Lauckhart oversees wholesale electricity price forecasting, project revenue analysis, consults regarding wind integration matters electric interconnection and transmission arrangements for new power projects, and other related matters in the electric power industry. In addition, he heads Black & Veatch's WECC regional power markets analysis team.

WECC Power Market Analysis and Transmission Analysis, Henwood/Global Energy Decisions/Ventyx

2000 - 2008 Senior Executive

Mr. Lauckhart oversaw wholesale electricity price forecasting, project revenue analysis, consulted regarding electric interconnection and transmission arrangements for new power projects, and other related matters in the electric power industry. In addition, he headed Global Energy's WECC regional power markets analysis team.

Lauckhart Consulting, Inc. 1996 – 2000

President

Primary client - Puget Sound Energy (formerly Puget Sound Power & Light Company): Involved in power contract restructuring, market power analysis, FERC 888 transmission tariffs, and other matters. Testified at FERC regarding Puget's 888 tariff. Testified for Puget in June, 1999 arbitration with BPA regarding transmission capability on the Northern Intertie.

Northwest IPP

Under retainer with IPP from July 1996 through December 31, 1999. Involved primarily in merchant power plant development activities including permitting activity, owner's engineer identification, environmental consultant identification, water supply arrangements, economic analysis, forward price forecasting, marketing, and related issues.

Levitan & Associates (Boston)

Participated in teams involved in electric system acquisition activities. Performed preliminary analysis for a major retail corporation regarding possible participation as an aggregator in the California deregulated electric market. Involved in the evolving discussions about deregulation in the state of Washington including participant in HB 2831 report and ESSB 6560 report.

Member of advisory task force for Northwest Power Planning Council study of generation reliability in the Pacific Northwest. Participating writer in a newsletter advocating electric deregulation in the state of Washington.

Puget Sound Power & Light Company 1991 – 1996

Vice President, Power Planning

Involved in all aspects of a \$700 million per year power supply for a hydro/thermal utility with a 4,600 MW peak and 2,200 MW energy retail electric load. Included responsibility for a 22 person department involved in power scheduling (for both retail and wholesale power activity), power and transmission contract negotiation and administration, regulatory and NERC compliance, forward price forecasting, power cost accounting, and retail rate activity related to power costs. Activity included matters related to 650 MW of existing gas-fired, simple cycle combustion turbines. In addition, 660 MW of combined cycle cogeneration "qualifying facilities" were developed by others for Puget during this time frame. Detailed understandings of the projects were developed both for initial contractual needs and later for economic restructuring negotiations. Mr. Lauckhart was the primary person involved in developing Puget's Open Access transmission tariff in accordance with FERC Order 888.

Puget Sound Power & Light Company 1986 - 1991

Manager, Power Planning

The company's key person in developing (1) a WUTC approved competitive bidding process for administering PURPA obligations, and (2) a WUTC approved regulatory mechanism for recovery of power costs called the Periodic Rate Adjustment Mechanism (PRAM).

Puget Sound Power & Light Company 1981 – 1986

Director, Power Planning

The company's key person in developing a power cost forecasting model that was customized to take into account the unique nature of the hydro generation system that exists in the Pacific Northwest.

Puget Sound Power & Light Company 1979 – 1981

Manager, Corporate Planning

Responsible for administering the corporate goals and objectives program.

Puget Sound Power & Light Company

Financial Planning

Improved and ran a computerized corporate financial forecasting model for the company that was used by the CFO.

Puget Sound Power & Light Company 1974 – 1976

Transmission Planner

Performed transmission engineering to assure a reliable transmission system.

Pacific Gas & Electric Company 1971 – 1974

Performed distribution engineering to assure a reliable distribution system.

Other Relevant Experience

- Expert testimony for Montana Independent Renewable Generators related to avoided cost regulations and pricing filed February 2009 at the Montana PSC.
- Expert testimony for LS Power in the SDG&E Sunrise Proceeding regarding economics of in-area generation vs. the cost of transmission and imported power Spring 2007
- Expert testimony for John Deere Wind in a proceeding in Texas in November 2008 related to avoided costs and wind effective load carrying capability
- Expert testimony in the BC Hydro Integrated Electricity Plan proceeding regarding WECC Power Markets. November 2006.
- Expert testimony for Pacific Gas & Electric regarding current PURPA implementation in each of the 50 states. January 2006.
- Expert testimony in CPUC proceeding regarding modeling procedures and methodologies to justify new transmission based on reduction of congestion costs (Transmission Economic Analysis Methodology – TEAM). Summer 2006.
- Expert testimony for PG&E regarding the cost alternative generation to the proposed replacement of steam generators for Diablo Canyon, Summer of 2004.
- Integrated Resource Plan Development for a large investor-owned utility in the Pacific Northwest, Global Energy provided advanced analytics support for the development of a risk-adjusted integrated resource plan using RISKSYM to provide a stochastic analysis of the real cost of alternative portfolios.
- Expert testimony for SDG&E, Southern California Edison, and PG&E regarding IRPs, WECC markets and LOLP matters before the California PUC, 2003.
- Valley-Rainbow Transmission Market Analysis-San Diego Gas & Electric. San Diego Gas & Electric also engaged Global Energy to analyze the economic benefits associated with building the Valley-Rainbow transmission line and to respond to the CPUC scoping memo that "SDG&E should describe its assessment of how a 500 kV interconnect, like Valley-Rainbow, will impact electricity markets locally, regionally, and statewide." Global Energy analyzed the economic benefits of the Valley-Rainbow line, prepared a report, sponsored testimony at the CPUC, and testified at the CPUC regarding the report.

- Expert testimony, Concerning the Economic Benefits Associated with Transmission Line Expansion. Testimony prepared on behalf of San Diego Gas & Electric Company, September 2001.
 - Expert testimony, prepared on behalf of AES Pacific regarding value of sale for Mohave Coal project to AES Pacific for Southern California Edison, December 2000.
 - Miguel-Mission Transmission Market Analysis-San Diego Gas & Electric. San Diego Gas & Electric retained Global Energy to oversee an analysis of the economic benefits associated with building the Mission-Miguel transmission line and the Imperial Valley transformer. Global Energy performed an analysis of the economic benefits of the Mission-Miguel line, prepared a report, sponsored testimony at the CPUC, and testified at the CPUC regarding the report.
 - Damages Assessment Litigation Support. Global Energy was engaged by Stoel Rives
 to provide damages analysis, Expert testimony and litigation support in for its client in
 a power contract damages lawsuit. Global Energy quantified the range of potential
 damages, assessed power market conditions at the time, and provided Expert
 testimony to enable Stoel Rives' client to prevail in a jury trial.
 - Expert testimony, concerning market price forecast in support of Pacific Gas and Electric hydro divesture case, December 2000
 - Expert testimony, prepared on behalf of a coalition of 12 entities regarding the impact of Direct Access of utility costs in California. June 2002. Mr. Lauckhart was Puget's primary witness on power supply matters in eight different proceedings before the Washington Utilities and Transportation Commission.

Mr. Lauckhart was Puget's chief witness at FERC in hearings involving Puget's Open Access Transmission Tariff and testified for Puget in BPA rate case and court proceedings.