

RESUME OF ROBERT E. YOUNG

ROBERT E. YOUNG
Economists.com

Managing Director
Portland, Oregon

*“Innovative Solutions for
21st Century Infrastructure Industries”*

economists.com



SUMMARY:

Mr. Young has extensive experience in economic, regulatory and financial and information technology consulting for the utility industry. Mr. Young advises several Pacific Island Electric utilities on diesel and solar generation, integrated resource planning, cost of service and rate design, and fuel adjustment clause design. He served recently as Staff of the Guam Public Utility Commission on water and wastewater regulation.

As part of the Glarus Group Team, Mr. Young used the AURORAxmp electric market forecasting and resource planning model to estimate the benefits of increased power sales between the **Mountain West Transmission Group (MWTG)** and the **Southwest Power Pool (SPP)**.

Mr. Young worked as part of the Modern Grid Solutions team which advised **Puget Sound Energy** on the redesign of the distribution grid in preparation for high penetration of distributed energy resources such as roof-top solar, electric vehicles, and energy storage. Projects included development of ADMS business case, integration of distribution planning into an integrated resource plan, prepared a feeder level forecasting whitepaper, distributed energy resource (DER) vision and strategy and preparation of IRP chapter in integration of distribution planning,

He serves as contract Staff for the Oregon Public Utility Commission and prepared testimony and exhibits for an electric rate case filed by Portland General Electric and a gas rate case filed by Avista Utilities.

He served recently as Staff of the Guam Public Utility Commission on water and wastewater regulation. Prepared expert testimony in regulatory proceedings filed by Guam Waterworks Authority, Guam Public Utility Commission Docket 19-08, Phase 1 and Phase 2.

Mr. Young serves on the Advisory Board of Digital Iron Network, a startup that plans to build a global network of Nvidia DGX-H100 supercomputers.

Mr. Young worked with Intel on a high-performance computing initiative to improve the performance of computer models used to prepare Integrated Resource Plans. He consulted with electric utilities concerning entry into the telecommunications business and developed a fiber optic strategy for Bonneville Power Administration. In addition, he developed a financial model of the fiber program for BPA and provided litigation support for a dispute with a telecom company that leased some of BPA's fiber.

Mr. Young has provided expert testimony on cost allocation and rate design before the Oregon Public Utility Commission, the Washington Utilities and Transportation Commission (WUTC), Guam Public Utilities Commission, Commonwealth Public Utilities Commission of the US Commonwealth of the Northern Marianas Islands, the Bonneville Power Administration (BPA), and the U.S. Department of Commerce.

Robert Young served as the lead damages witness for Isolux, a large multi-national construction company that built over \$800 million of transmission plant for an independent transmission company as part of the \$7 billion Texas Competitive Renewable Energy Zone project, designed to integrate wind generation from west Texas into central Texas, the location of most of the state's electric load.

Assisted Rio Tinto in the \$38 billion acquisition of Alcan Aluminum in 2007. Working directly for CFO, Mr. Young provided a valuation of Alcan's over 4,100 MW of hydro generation and other merger related issues.

Mr. Young prepared an expert report and reply report in a contract dispute between two aluminum companies before the International Chamber of Commerce, International Court of Arbitration.

Developed an information systems architecture plan for the Transmission Business Line (TBL). Mr. Young advised TBL on the development of new transmission billing, metering, scheduling, and contracts systems. He has also provided strategic consulting to US Generating Co. and PacifiCorp. Mr. Young has assisted large high-tech manufacturing companies with negotiating open access electric power sales agreements and advised a large independent power producer on electric power pricing issues for a proposed new aluminum smelter.

Mr. Young taught a variety of classes on engineering economics, regulatory economics and accounting, rate of return, cost allocation and rate design, and economic and financial analysis at numerous utilities in the US and in small Pacific Island utilities. He enjoys teaching classes to the next generation of electric utility industry leaders throughout the world and has in excess of 500 in-class hours of electric utility training experience.

Represented the **Oregon Department of Corrections (DOC)** in contract negotiations and mediation of rates for fire service at the Snake River Correctional Institution (SRCI). Worked with DOC management and Oregon Department of Justice attorneys to research comparable rates for SRCI fire service and developed a financial model of the Ontario Fire Department to determine their cost of fire service for SRCI.

Developed a comprehensive capital budgeting methodology for the transmission group of **Saudi Electricity Company**.

Represented **Energy Northwest** (then Washington Public Power Supply System, **Portland General Electric**, and **Xcel Energy** (then Public Service of Colorado) on setting rates for disposal of low-level-radioactive waste before the Washington Utilities and Transportation Commission.

Mr. Young taught a variety of classes on engineering economics, regulatory economics and accounting, rate of return, cost allocation and rate design, and economic and financial analysis at numerous utilities in the US and small Pacific Island utilities. He enjoys teaching classes to the next generation of electric utility industry leaders throughout the world and has more than 500 in-class hours of electric utility training experience.

Mr. Young received a B.S. and a M.S. in Economics from Southern Illinois University.

PROFESSIONAL EXPERIENCE

ECONOMISTS.COM

Portland, Oregon

Managing Director

- Analyzed engineering, economic, and regulatory issues related to competitive alternatives to **Commonwealth Utilities Corporation (CUC)** energy services to its customers, including solar, wind, liquefied natural gas, and new diesel generation. Provided estimates of the costs to customers of alternative energy supplies, and assisted CUC with the development of their first integrated resource plan. Testified in Commonwealth Public Utility Commission Dockets 13-01, 15-01 and 16-01
- Assisted **Commonwealth Utilities Corporation** with analysis of responses to a fuel supply contract. Served on CUC's Source Selection Committee that awarded a new six-year fuel supply contract that represents almost 70% of CUC's annual operating expense.
- Provides rate design, financial strategy, resource planning, fuel supply, and other services to the **Guam Power Authority, Commonwealth Utilities Corporation, American Samoa Power Authority, Electric Power Corporation of Samoa, and the Palau Public Utilities Corporation.**
- Developed a comprehensive information systems strategic plan for **Bonneville Power Administration Transmission Business Line**. Elements included business imperatives for change, assessment of existing technology, new information technology architecture, data governance, and data stewardship, and implementation plan.
- Advised **Bonneville Power Administration** on the development of new transmission billing, metering, scheduling, and contracts systems.
- Assisted in the development of an IT strategic plan for **Guam Power Authority**. Reviewed existing IT governance processes, operations, software and data architecture, networks, hardware assets, and controls. Compared to industry best practices for similar utilities. Recommended changes in IT funding levels and priorities. Assisted in resolving network performance issues.
- Assisted **Bonneville Power Administration** with the development and implementation of the 2008 Average System Cost Methodology (ASCM). Researched accounting issues and prepared issue papers related to the use of the FERC Form 1 as the basis for the new ASCM. Appeared as an expert witness in WP-07S and WP-10 BPA Rate Cases on ASC technical and policy issues. Identified regulatory and financial concerns of participating public and private utilities, and analyzed economic, legal, and political factors. Reviewed transfer pricing arrangements between PacifiCorp and its mining subsidiaries. Addressed customer and party concerns in resolving complex program issues. Reviewed and analyzed over 60 ASCM filings by participating utilities.
- Provided a variety of energy management services for **Nordstrom**. Reviewed electric and gas commodity contracts, assessed performance vs. regulated tariffs, and recommended a revised portfolio strategy. Prepared annual electricity budget and quarterly variance report for over 200 Nordstrom facilities nationwide. The electricity budget for kWh sales and revenue were

consistently within 1% on kWh sales and 2% on cost. Defined requirements for a new energy information management system and processing of energy bills, identified viable vendors and assisted in vendor selection.

- Reviewed energy risk management policies and practices at **Snohomish PUD**. Identified board objectives for risk management and clarified risk preferences, reviewed risk management manual and formalized practices, and tested risk metrics and analytical methods. Reviewed governance structure, controls, trading book documentation, and trading processes for both physical and derivative transactions. Recommended appropriate risk management improvements, and outlined methods for integrating risk management and resource planning more effectively.
- Provided litigation support for **Snohomish PUD** in litigation before the FERC. Litigation focused on alleged overcharges, unreasonable contractual terms, and exercise of market power by certain power marketers during the Western power crisis of 2000-2001. Quantified economic impacts on clients, identified bounds for just and reasonable terms based on competitive market fundamentals, and accepted industry practices demonstrated compelling public interest to justify contract modification, and outlined proposed remedies. Supported client counsel in case strategy, discovery, and briefing.
- Developed North American market strategy for **Alstom's** Energy Management and Markets business unit. EMM is a leading vendor of critical operations control and telecommunication systems for electricity and gas companies. Identified critical business issues facing Alstom's customers, assessed profitability and attractiveness of available segments of the customer value chain, analyzed competing vendors and recommended break-out growth strategy. Developed business case tool and assisted in the rollout of the sales campaign. Drove a major strategic alliance with a global electronics manufacturer
- Served as an expert witness in an arbitration proceeding for **Kaiser Aluminum** against Rio Tinto/Comalco before the International Chamber of Commerce, International Court of Arbitration concerning legal disputes related to the enforceability of commodity supply contracts in unusual market conditions during the West Coast electricity crisis. Identified key issues to be addressed, used electric industry market data and personal expertise to compile the documentary record, analyzed market fundamentals and related price behavior, and drafted initial and reply reports. Considered issues related to client bankruptcy filings. Coordinated with outside and inside counsel in case strategy, discovery, depositions, hearings, and briefs.
- Provided acquisition integration assistance to the President of **US Generating Co.** for the transformation of the Boston, MA. office of the former J. Makowski & Associates into US Generating's first major regional office. Defined overall organizational structure for the regional office, integrated and refined strategic direction and intent of the consolidated organization, and communicated results to Boston office staff.
- Successfully represented **Norsk Hydro Canada, Inc.**, (NHCI) owner of the largest magnesium plant in North America, in defense of a counter-veiling duty petition filed by a U.S. Magnesium producer. The petition argued that the variable rate power contract between NHCI and Hydro Quebec constituted a government subsidy. Prepared a report and briefed U.S. Commerce Department staff on utility rate design and cost allocation for large industrial customers and the worldwide development and use of variable rate power contracts for large,

nonferrous metal smelters. Presented Oral Argument before the US Department of Commerce during the hearings phase of this dispute.

- Reviewed energy risk management policies and practices at **Snohomish PUD**. Identified board objectives for risk management and clarified risk preferences, reviewed risk management manual and formalized practices, tested risk metrics and analytical methods. Reviewed governance structure, controls, trading book documentation, and trading processes for both physical and derivative transactions. Recommended appropriate risk management improvements, and outlined methods for integrating risk management and resource planning more effectively.
- Provided litigation support for **Snohomish PUD** in litigation before the FERC. Litigation focused on alleged overcharges, unreasonable contractual terms, and exercise of market power by certain power marketers during the Western power crisis of 2000-2001. Quantified economic impacts on clients, identified bounds for just and reasonable terms based on competitive market fundamentals and accepted industry practices, demonstrated compelling public interest to justify contract modification, and outlined proposed remedies. Supported client counsel in case strategy, discovery, and briefing.
- Assisted the **City of Portland** with determining the effects of electric utility restructuring on franchise fee revenues after Oregon Senate Bill 1149 was signed into law. Analyzed the effect of a volumetric approach to franchise fee collection on revenues and customer classes for SB 1149. Prepared report for the City of Portland analyzing various volumetric franchise fee scenarios consistent with the provisions of SB 1149.
- Assisted an Independent Power Producer in preparation of responses to utility resource RFPs. Reviewed and analyzed responses to public utility resources RFPs. Assisted in the development and sale of a proposed wood-fuel resource in British Columbia.
- Assisted **PacifiCorp** in the development of their least-cost plan, Resource and Market Planning Program-3.
- Negotiated open market electric power sales contracts under PGE's Customer Choice Pilot Program for **Komatsu Silicon America** and **Integrated Device Technology**. Assisted **NEC America** with contract negotiations and analysis for an open market electric power sales contract.
- Represented the **Port of Morrow**, an Oregon port district in economic, financial, and regulatory matters for the construction of two 220 MW cogeneration units.
- Reviewed cable TV rate filings for a variety of cities across the US. Analyzed rate design, cost allocation, and rate of return for compliance with FCC regulations.
- Assisted **BPA** in preparation of its Business Plan Environmental Impact Statement (BPEIS). Faced with continuous radical changes in the electric utility industry, BPA engaged in an intensive and thorough review of its business strategy. The result was BPA's Business Plan and the associated BPEIS, which were published in 1995. The BPEIS was used as the basis for several BPA Record of Decisions including new transmission agreements for BPA's large industrial customers (DSIs). These new contracts were challenged at the 9th Circuit Court of Appeals by a group of BPA customers and others. The 9th Circuit affirmed BPA's right to offer new transmission agreements and the validity of the BPEIS.
- Advised major European energy company on West-coast electric market economics and performed feasibility analysis on location of new generating capacity in the Pacific Northwest.

Manager

- Managed consulting team of over 15 financial analysts, auditors, and economists to assist **Bonneville Power Administration** in administering the Average System Cost rate equalization program. This program distributes over \$150 million annually to Northwest utilities for equalizing residential electric rates. Identified regulatory and financial issues relating to participating public and private utilities, and analyzed economic, legal, and political factors. Incorporated customer and party concerns in successfully resolving complex issues facing the program. Reviewed and analyzed over 75 cost allocation and rate design studies for compliance with Average System Cost Methodology procedures.
- Assisted **Bonneville Power Administration's** Transmission Business Line with the development of a revenue forecasting system. Specified business objectives and functional requirements for actual and forecasted revenue by product, customer, and contract. Evaluated software and hardware options, and developed high-level system design. Planned package modification, programming, testing, and roll-out of the completed system.
- Conducted a study for **Bonneville Power Administration** comparing transmission operations and maintenance practices and management at five large North American utilities. Conducted on-site visits, developed engineering and accounting information consistently across utilities, analyzed system characteristics, and compared key practices and performance measures.
- Directed a team of consultants which developed a comprehensive model of the resource plans, finances, and rates of over sixty Northwest utilities for **Bonneville Power Administration**. Developed load/resource balance models, reviewed and revised load forecasts, developed resource stacks ordered by cost-effectiveness, projected long-term resource additions and financial impacts, and analyzed key sensitivities.
- Directed **Bonneville Power Administration** team in analysis and position development in utility merger regulatory proceedings before state PUCs and FERC. Determined operational and financial effects of the PP&L/UP&L merger, reviewed transfer pricing arrangements between PacifiCorp and Utah Power and Light and their coal mining subsidiaries, reviewed filings, and drafted testimony. Assessed competitive implications.
- Managed the development of the Financial Strategy for **Bonneville Power Administration**. This strategy was used as the basis for the development of BPA's long-term financial plan, resulting in positive Net Revenues (retained earnings) for the first time in over 10 years.
- Directed an analysis to determine the price for the sale of long-term transmission rights for **Bonneville Power Administration**. Identified highest-value transactions over the line, determined net benefits, evaluated private opportunity costs, considered market constraints on pricing, assessed regulatory and technological risks, and developed positions on financing and contractual issues.

DIRECT SERVICE INDUSTRIES, INC.
Director of Rates and Technical Issues

Portland, Oregon

- Responsible for the coordination of policy analysis on all energy issues affecting member companies of Direct Service Industries, Inc., a trade association consisting of 11 members with 15 energy-intensive plants whose annual electric energy cost exceeded \$700 million per year and purchased over 3,200 AvMW of electricity at full production.
- Participated in the development of a detailed production-costing model of the Pacific Northwest aluminum industry. The model forecasts aluminum industry electricity loads and revenues.

Portland General Electric Company
Rate Analyst

Portland, Oregon

- Developed a 20-year generation-expansion model to determine the need for future generating resources.
- Designed electric rates and prepared cost-of-service studies.

Professional Memberships (and Offices Held)

Western Energy Institute Executive Committee, Board of Directors 2016

Western Energy Institute Board of Directors 2003 – 2006, 2013 – 2016

American Nuclear Society

Civic/Charitable Organizations (*selected, and offices held*)

Ainsworth Public School Foundation

Co-Chair Board of Directors 2003 - 2005

Board of Directors, 2002 - 2005

Oregon Ballet Theatre

Treasurer, Board of Directors, 1992 - 1993

Board of Directors, 1989 - 2002

Pacific Ballet Theatre

Vice-President, Board of Directors, 1986-1988

Treasurer, Board of Directors, 1985-1986

Board of Directors, 1984-1988