

SCHEDULE 4

Vita

Dr. Robert Loube

Personal Data

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Silver Spring, Maryland 20901
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Education

Ph.D., Economics, Michigan State University, 1983
M.A., Economics, University of Massachusetts-Amherst, 1971
B.S., Economics, University of Maryland-College Park, 1969

Professional Experience

Utility Regulation

Vice President

Rolka Loube and Saltzer Associates

April 2007 to Present

Responsibilities include:

- Filed testimony on behalf of the New Hampshire Office of the Consumer Advocate in the Petition of the TDS Companies for AFOR regulation, New Hampshire Public Utilities Commission, on October 12, 2007.
- Testified on behalf of the Maine Office of the Public Advocate in the Joint Application for Approvals Related to Verizon's Transfer of Property and Customer Relations to Company to be Merged with and into Fairpoint Communications, Inc. Maine Public Utilities Commission Docket No. 2007-67 on October 2, 2007.

Director, Economic Research

Rhoads & Sinon, LLC

April 2001 to March 2007

Responsibilities include:

- Testified on behalf of the Washington Public Counsel in the Matter of the Petition of Qwest Corporation to be Regulated Under An Alternative Form of Regulation, WUTC Docket No. UT-061625, March 14, 2007.
- Filed rebuttal testimony on behalf of the Pennsylvania Office of Consumer Advocate in the 2006 Annual Price Stability Index/Service Price Index of Buffalo Valley Telephone Company, Conestoga Telephone & Telegraph Company, and Denver & Ephrata Telephone & Telegraph Company, PA PUC Docket No. P-0098142F1000, filed January 5, 2007.
- Testified on behalf of the Attorney General Michael A. Cox, In the Matter of the Notice by AT&T Michigan Pursuant to sections 304(d) and 310a of the Michigan Telecommunications Act of an increase to the rate for primary basic local exchange service in the amount not to exceed AT&T Michigan's intrastate end user line charge in effect on July 1, 2005, MPSC Case No. 15036, filed January 30, 2007.
- Prepared comments on behalf of the Pennsylvania Office of the Consumer Advocate, FCC Intercarrier Compensation Workshop and Solicitation of Comments on the Missoula Plan, Pennsylvania Public Utility Commission Docket No. M-000061972.
- Prepared an affidavit on behalf of the National Association of Utility Consumer Advocates (NASUCA) and the Maine Office of the Public Advocate, In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, filed August 22, 2006.
- Adviser to the Maryland office of the People's Counsel, In the Matter of Cavalier Telephone Midwest Atlantic for Breach of Interconnection Terms by Verizon Maryland, Inc., Case No. 9046.
- Testified on behalf of the Maine Office of Public Advocate in the Investigation Into Verizon Maine's Alternative Form of Regulation, Phase I, Docket No. 2005-155, October 17 and October 18, 2006.
- Prepared comments on behalf of the National Association of State Utility Consumer Advocates (NASUCA) In the Matter

of the Federal-State Joint Board on Universal Service, CC Docket No. 96-45, filed March 27, 2006 (with David Gabel and the NASUCA Telecommunications Committee).

- Adviser to the Washington State Public Counsel in the Investigation of the Sprint-Nextel Merger, Washington Utilities and Transportation Docket No. UT-051291.
- Filed direct testimony on behalf of the Maine Office of Public Advocate in the Investigation Into Verizon Maine's Alternative Form of Regulation, Phase II, Docket No. 2005-155, January 13, 2006.
- Testified on behalf of the Maine Office of Public Advocate in the Investigation into Line Sharing, Maine Docket No. 2004-809, November 18, 2005.
- Adviser to the U.S. Department of Justice in United States of America v. Coastal Utilities, Inc., Case No. CV-404-90.
- Testified on behalf of the Maine Office of Public Advocate in Verizon Communications, Inc. and MCI, Inc., Review of Joint Application for Approval of Merger, Maine Docket No. 2005-154, September 29, 2005.
- Filed direct, rebuttal and surrebuttal testimony on behalf of the Office of Consumer Advocate in Pennsylvania Docket No. C-20027195, June 8, June 29, and July 11 2005.
- Filed a rebuttal declaration regarding price floor issues on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed April 1, 2005.
- Filed a price floor declaration on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed January 28, 2005.
- Filed direct testimony on behalf of Public Counsel and AARP in re: WUTC v. Verizon, Docket No. UT-040788, before the Washington Utilities and Transportation Commission, December 17, 2004.
- Filed a rebuttal declaration on behalf of The Utility Reform Network in re: Investigation on the Commission's

Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed November 9, 2004

- Prepared a report on the State of Telecommunications Services in Nevada for the subcommittee to study telecommunications service in Nevada, August 2004,
- Filed a declaration on behalf of The Utility Reform Network in re: Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, Verizon UNE Phase, Investigation 93-04-002, filed August 6, 2004
- Filed expert rebuttal testimony on behalf of the Staff of the South Carolina Commission in re: Implementation of requirements Arising from Federal Communications Commission Triennial UNE review: Local Circuit Switching for mass market customers, SC PSC Docket No. 2003-326-c.
- Testified on behalf of the Pennsylvania Office of Consumer Advocate in re: Investigation into the Obligations of Incumbent Local Exchange Carriers to Unbundle Network Elements, PA PUC Docket No. I-0030099.
- Prepared an Affidavit for the National Association of State Utility Consumer Advocates in the Matter of the Review of Commission's Rules Regarding The Pricing of Unbundled Network Elements And the Resale of Service by Incumbent Local Exchange Carriers, WC Docket No. 03-173 (with David Gabel).
- Provided expert advice to the Cities of Austin, Dallas, Fort Worth, and Hereford in Southwestern Bell Telephone Company's Filing To Establishing Surcharges Resulting From District Court Remand Of PUC Final Order In Docket No. 18509, SOAH Docket No. 473-03-1620, Texas PUC Docket No. 26719.
- Filed expert testimony on behalf of the Staff of the Nevada Public Utilities in The Petition of Nevada Bell for an Order commencing a proceeding to determine the costs and rates for unbundled network elements, Docket No. 00-7012
- Prepared comments for the National Association of State Utility Consumer Advocates in the Matter of Cost Review Proceeding for Residential and Single-Line Business Subscriber Line Charge Cap, FCC CC Docket No. 96-262 (with David Gabel)
- Technical Adviser to the Alabama Public Service Commission in the Generic Proceeding to Establish Prices

for Interconnection Services and Unbundled Network
Elements - Docket No. 27821

- Prepared reply comments for the Office of the People's Counsel of the District of Columbia In the Matter of Developing a Unified Inter-carrier Compensation Regime, FCC CC Docket No. 01-92.
- Assisted the Universal Service Administrative Company in managing the interstate common line and model support programs.

Industry Economist, GS 301-15
Federal Communications Commission
May 1996 to April 2001

Responsibilities include:

- Established the criteria for choosing the universal service economic cost model;
- Evaluated and modified telephone cost models;
- Determined the input values used in telephone cost models;
- Served on the FCC staff of the Federal State universal service joint board;
- Developed and evaluated alternative universal service funding proposals;
- Developed and compared alternative jurisdiction separations allocators with regard to the impact of the allocators on state and federal jurisdictional responsibilities;
- Reviewed orders of other divisions to ensure that those orders complement the tasks and mandates of the Accounting Policy Division;
- Conducted special studies for use by the Chairman, Commissioners, Bureau Chief or Division Chief
- Provided technical economic advice to the division legal staff regarding common carrier operations and regulatory policy.

Director, Office of Economics
Public Service Commission of the District of Columbia,
July 1993 to May 1996

Responsibilities include:

- Supervised the preparation of staff testimony in telephone, electric and gas utility cases.
- Represented the Commission on the Staff of Federal State Separations Joint Board.
- Prepared and presented testimony on the strategic approach to electricity demand side management and least cost planning principles.
- Represented the Commission on the National Association of Regulatory Utility Commissioners Communications Committee's universal service and access reform working groups.

Acting Director, Office of Economics
Public Service Commission of the District of Columbia,
 February 1993 to July 1993

Responsibilities include:

- Prepared comments on FERC Notices of Proposed Rulemaking.
- Represented the Commission on the telephone quality of service and low-income program working groups.

Senior Telecommunications Economist
Public Service Commission of the District of Columbia,
 May 1989 to the February 1993

Responsibilities include:

- Prepared and presented testimony regarding telephone rate structure, competition in telephone markets, embedded cost studies, and long run incremental cost studies.
- Represented the Commission on digital deployment and generic cost manual working groups.
- Represented the Commission on the staff of the 410B Joint Federal/State Conference on Open Network Architecture.
- Prepared comments on FCC Notices of Proposed Rulemaking.

Econometrician,
Indiana Utility Regulatory Commission,
 March 1988 to May 1989

Responsibilities include:

- Developed electric energy and demand forecasts.
- Supervised consultants developing economic and demographic models for utility service territories.
- Represented the Commission on the Executive Committee on Intrastate Access Charges.

**Principal Utility Analyst,
Indiana Utility Regulatory Commission,
January 1986 to March 1988**

Responsibilities include:

- Prepared and presented testimony regarding demand forecasting for telephone and electric services, cost of equity and long run marginal cost.
- Contributed to staff reports on energy and demand forecasts.
- Developed financial forecasts for electric utilities.

International Consulting

Telephone Organization of Thailand, conducted a Tariff and Cost Workshop for Senior Management and Staff, Bangkok, February 5-7, 2001. Contractor: Booz, Allen & Hamilton, Inc.

Ministry of Communications, Indonesia, drafted a report on best practices guidelines for Universal Service Obligations, and conducted round-table with the Ministry of Communications staff and with the U. S. telecommunications community, Jakarta, August 20-September 9, 2000. Contractor: Nathan Associates, Inc.

Teaching

**Assistant Professor,
James Madison University,
September 1983 to December 1985**

**Instructor,
James Madison University,
September 1979 to June 1983**

Courses Taught: Industrial Regulation, Industrial Organization (undergraduate and MBA),

Intermediate Macroeconomic Theory, Economic
Analysis (MBA), Principles (Macro and Micro)

Other

Economist in the Office of Director, Bureau of Economic Analysis,
Department of Commerce, Washington D.C.,
November 1972 to September 1975

Publications

"The Telecommunications Act of 1996: Residential Rates and
Competition," *Utilities Policy*, September 2004.

"Universal Service: How much is enough?" *Journal of Economic
Issues*, June 2003.

"Public Interest Regulation, Common Costs and Universal Service,"
eds. Edythe S. Miller and Warren J. Samuels, *An Institutional Approach to Public Utilities Regulation*, Michigan State
University Press, 2002.

"Price Cap Regulation: Problems and Solutions," *Land Economics*,
Vol. 71, Number 3, August 1995.

"Measuring the Total Service Long-Run Incremental Cost," *Ninth
NARUC Biennial Regulatory Information Conference*, September 1994
(with David Gabel and Mark Kennet).

"The Proper Use of Stand Alone Cost Studies," *Ninth NARUC
Biennial Regulatory Information Conference*, September 1994.

"State Experience in InterLATA Toll Deregulation," *Journal of
Economic Issues*, Vol. XXVIII, No. 2, June 1994 (with Labros
Pilalis).

"Price Caps and Cross-subsidization," *Eighth NARUC Biennial
Regulatory Information Conference*, Ohio State University, 1992.

"The Institutional Conditions for Technological Change: Fiber to
the Home," *Journal of Economic Issues*, Vol. XXV, No. 4, December
1991.

"Fiber to the Home: A Competitive Analysis," *Seventh NARUC
Biennial Regulatory Information Conference*, Ohio State
University, 1990.

"The Return of the Electric Utility Holding Company and the
Future of the Electric Supply Industry," *Journal of Economic
Issues*, Vol. XXIII, No. 2, June 1989.

"Impact of the National Appliance Energy Conservation Act on Residential Energy Consumption within a Service Territory," *Sixth NARUC Biennial Regulatory Information Conference*, Ohio State University, 1988 (with Katri Clodfelder).

A Summary of Future Demand Trends and Capacity Plans for Major Electric Utilities in Indiana, Public Service Commission of Indiana, Indianapolis, Indiana, 1987 (with Wayne Lash, et al).

Electric Demand and Supply Planning for the State of Indiana, Public Service Commission of Indiana, Indianapolis, Indiana, 1985 (with Wayne Lash, et al).

"District Heating and Regulatory Reform," *Proceedings of the Seventy-Fifth Annual Conference of the International District Heating Association*, Washington D.C.:IDHA 1984.

State and Local Regulation of District Heating and Cooling Systems: Issues and Options, Argonne, Illinois: Argonne National Laboratory, 1981 (with Philip Kier, et al).

"Michigan's Hydroelectric Potential," *The Michigan State Economic Record*, Volume 20, Number 7 (July-August 1978), Division of Research, Graduate School of Business, Michigan State University.

Staff Testimony

Before the Public Service Commission of the District of Columbia:

Formal Case No. 929 The Application of Potomac Electric Power Company for an Increase in its Retail Rates for the Sale of Electric Energy.

Principal Issues: Class Revenue Responsibility, Rate Structure and Low Income Rates.

Formal Case No. 926 The Application of The Chesapeake and Potomac Telephone Company for Authority to Establish a Revenue Requirement and to Increase and Restructure its Schedule of Rates and Charges

Principal Issues: Centrex burden and the Centrex embedded cost study.

Formal Case No. 917

Phase II

The Application of Potomac Electric Power Company For Approval of its Third Least Cost Plan

Principal Issues: The Strategic Approach to DSM Develop and Implementation, Level of DSM Spending, Appropriate Standards

by Which DSM Expenses Should Be Judged Prudent, and Rate Design and Least-Cost Planning Principles.

Formal Case No. 891 The Application of Chesapeake and Potomac Telephone Company to Offer Return Call and Caller ID Within the District of Columbia

Principal Issues: Tying Arrangements Between Sales of Equipment and Services, and Public Policy Issues Associated With the Offering of Caller ID

Formal Case No. 850 Investigation into the Reasonableness of the Authorized Return on Equity, Rate of Return, and Current Charges and Rates for Telecommunications Services Offered by the Chesapeake and Potomac Telephone Company

Principal Issues: Rate Design, Incremental Cost and Embedded Cost Studies

Formal Case No. 814

Phase III Investigation into the Impact of AT&T Divestiture and Decisions of the Federal Communications Commission on the Chesapeake and Potomac Telephone Company's Jurisdictional Rates

Principal Issues: Flexible pricing, incremental cost studies, tests for the existence of competition, criteria for measuring alternative regulatory plans.

Formal Case No. 814 Investigation into the Impact of AT&T Divestiture and Decisions of the Federal Communications Commission on the Chesapeake and Potomac Telephone Company's Jurisdictional Rates

Principal Issues: The Use of Cross Elasticity Studies and Market Surveys to Define Markets for Telecommunications Services

Telephone Tariff

91-3 Investigation of the Chesapeake and Potomac Telephone Company's General Regulations Tariff No. 201, Section 1

Principal Issues: Regulatory safeguards and costs of pre-approval of special assemblies

Before the Indiana Utility Regulatory Commission:

Cause No. 38665 Joint Petition of Century Telephone Enterprises, Inc., Odon Telephone Co., Inc. and Colonial Telephone Company, Inc.

Principal Issue: Approval of the Purchase of Odon by Century

Cause No. 38560 Petition of Northern Indiana Public Service Company
Principal Issues: Economic Development Rates and Long Run Marginal Cost

Cause No. 38426 Petition of GTE-Indiana
Principal Issues: Revenue Adjustment, Cross-Subsidization, Cost Methodology and Demand Repression

Cause No. 38415 Petition of Public Service Company of Indiana
Principal Issue: Financing Authority

Cause No. 38302 Joint Petition of Indiana Gas Company, Inc. and Westport Natural Gas Company, Inc.
Principal Issue: Acquisition Adjustment

Cause No. 38158-S1 Investigation to Determine the Extent of Regulation of Pay Telephone Equipment
Principal Issue: Regulation of IXC-Owned Pay Phones

Cause No. 38158 Investigation to Determine the Extent of Regulation of Pay Telephone Equipment
Principal Issues: Deregulation and Rate Structure

Cause No. 38061 Petition of Midwest Natural Gas Corporation
Principal Issue: Cost of Equity

Cause No. 38059 Petition of Indiana Bell Telephone Company, Inc.
Principal Issues: Local Measured Service and Long Run Marginal Cost

Cause No. 38045 Petition of Northern Indiana Public Service Company
Principal Issues: Demand Forecasting, Financial Viability and Regulatory Policy with Regard to Excess Capacity

Cause No. 38034 Petition of Odon Telephone Company, Inc.
Principal Issues: Acquisition Adjustment, Cost of Equity, Financing Authority, and Service Improvement Program

Cause No. 37938 Petition of Northern Indiana Public Service Company
Principal Issues: Economic Development Rates

Cause No. 37927 Petition of United Telephone of Indiana
Principal Issues: Cost of Equity

Cause No. 37866 Petition of Hoosier Energy Rural Electric Cooperative, Inc., et al.
Principal Issues: Economic Development Rates and Long Run Marginal Cost

Cause No. 37814 Petition of United Telespectrum of Indiana, Inc.
Principal Issue: Certificate of Territorial Authority

Cause No. 37735 Petition of Westport Natural Gas Company, Inc.
Principal Issue: Cost of Equity

Cause No. 37706 Petition of Midwest Natural Gas Corporation
Principal Issue: Cost of Equity

Cause No. 37686 Petition of Indiana Bell Telephone Company, Inc.
Principal Issue: Demand Repression

Cause No. 37414 Petition of Public Service Company of Indiana
Principal Issues: Forecasting Methodology and Capacity
Planning

Lectures

"Network Neutrality and Service Quality," and "Telecommunications Pricing," NARUC Advanced Regulatory Studies Program, June 2006.

"Public Utility Pricing," "Retail Pricing in Telecommunications," and "Cost Models in Telecommunications," NARUC Annual Regulatory Studies Program, August 2004.

"Retail Pricing in Telecommunications," NARUC Annual Regulatory Studies Program, August 2003.

"The Evolution of Telecommunications Pricing," NARUC Annual Regulatory Studies Program, August 2002.

"Federal Restructuring of the Telecommunications Industry," "Federal Universal Service Programs," and "State Universal Service Programs," NARUC Annual Regulatory Studies Program, August 2001.

"Cost Modeling in Telecommunications," NARUC Annual Regulatory Studies Program, August 2000.

"Cost Modeling in Telecommunications," NARUC Annual Regulatory Studies Program, August 1999.

"Cost Modeling and Universal Service," NARUC Annual Regulatory Studies Program, August 1998.

"Cost Modeling in Telecommunications," NARUC Annual Regulatory Studies Program, August 1997.

"Policy Issues Raised by Performance-Based Incentive Systems,"

Public Policies Toward Competition in the Electric Power Industry, Wisconsin Public Utility Institute, October 1994.

"Cost Allocations in Broadband Networks," NARUC Annual Regulatory Studies Program, August 1994.

"Pricing Concepts and the Control of Price Discrimination in Advanced Telecommunications Networks: Issues and Methods," NARUC Advanced Regulatory Studies Program, January 1994.

"Cost Allocation in Advanced Telecommunications Networks: Issues and Methods," NARUC Annual Regulatory Studies Program, August 1993.

"A Review of Incentive Regulation," CAMPUT 7th Annual Regulatory Conference, Banff Canada, May 1993.

"New Social Contracts: Telecommunications Policy for the 21st Century," Annual Meeting of the Association of Evolutionary Economics, January 1993.

"Modernization: Who Pays? Who Benefits?," NARUC Annual Regulatory Studies Program, August 1992.

"Who Determines the Costs and Prices for Access to the Infrastructure," Telecommunications Policy: Agenda for the 21st Century Conference, The Michigan Divestiture Research Fund, March 1992.

"The New Social Contract," State Policies for Developing the Telecommunications Infrastructure Forum, Wisconsin Public Utility Institute, December 1991.

"RBOC Strategic Reactions to Entry," Atlantic Economic Society Annual Conference, Washington, D.C., October 1991.

Industry Committees

Federal Staff of the Federal-State Joint Board of CC Docket No. 80-286 (June 1999 to April 2001).

Federal Staff of the Federal-State Joint Board of CC Docket No.96-45 (May 1996 to April 2001).

National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Communications (1994-1996).

State Staff of the Federal-State Joint Board of CC Docket No.80-286 (1991-1996).

Professional Associations

Member: American Economic Association
 Association for Evolutionary Economics