

**EXHIBIT NO. ___(JAD-2)
DOCKET NO. UE-072300/UG-072301
2007 PSE GENERAL RATE CASE
WITNESS: DR. JEFFREY A. DUBIN**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

**Docket No. UE-072300
Docket No. UG-072301**

**FIRST EXHIBIT (PROFESSIONAL QUALIFICATIONS) TO THE
PREFILED REBUTTAL TESTIMONY OF
DR. JEFFREY A. DUBIN
ON BEHALF OF PUGET SOUND ENERGY, INC.**

JULY 3, 2008

JEFFREY A. DUBIN, Ph.D.
Co-Founder and Participant
Pacific Economics Group

*301 North Lake Avenue, Suite 330
Pasadena, CA 91101
Tel: 626-683-9395
Fax: 626-683-9517*

Jeffrey A. Dubin is Co-Founder and Partner in Pacific Economics Group. He is also a tenured Professor of Economics at the California Institute of Technology. His research focuses on microeconomic modeling with particular emphasis on discrete-choice econometrics. Current research topics include: discrete-choice econometrics, energy economics, tax compliance, sampling and survey methods, valuation of intangible assets, and studies of ballot proposition voting. Some examples of his work include:

INTELLECTUAL PROPERTY

- For a defendant law firm, Dr. Dubin developed a damage estimate for patent infringement litigation involving a computer upgrade chip patent.
- For a photographic equipment manufacturing company involved in patent infringement litigation, Dr. Dubin developed an econometric model to measure the relevant market, the product demand in that market and the damages resulting from the infringement.
- For a major computer company involved in patent litigation, Dr. Dubin reanalyzed a survey of computer purchase decisions offered by plaintiffs as evidence of historical damages. Dr. Dubin also designed and implemented a survey of computer users to measure potential damages.
- For a large U.S. food and beverage company, Dr. Dubin has developed econometric theory and models to assign values to several intangible assets. His approach is based on the comparison of the demand for branded and private label products.
- For a Japanese manufacturer of fractional horsepower micro-motors used in automobile power door locks and power mirrors allegedly infringed by a Hong Kong manufacturer, Dr. Dubin developed an econometric model of the world demand for micro-motors. This model was used in conjunction with an

international pricing model to calculate lost profits from foregone sales and price erosion.

- For a large manufacturer of a top-50 chemical, Dr. Dubin developed a model of the world supply and demand for this chemical in order to calculate the damage resulting from a process patent infringement.
- In federal court litigation brought in New Orleans, Dr. Dubin assisted in developing a celebrity goodwill value assessment for appropriating a nationally known chef's likeness.
- For a developer of software, which provides credit card scoring, Dr. Dubin assisted counsel in developing alternative damage theories.
- For a manufacturer of a branded car wax, Dr. Dubin assisted counsel in damage calculations under alleged tradedress and trademark issues.
- For a manufacturer of artificial joint implants, Dr. Dubin developed an econometric model of product selection by orthopedic surgeons in order to quantify potential lost profits.

ANTITRUST

- For generic manufacturers of several leading pharmaceuticals, Dr. Dubin analyzed higher prices paid by consumers that resulted from delaying the time when manufacturers branded patented drugs go off patent.
- For the generic manufacturers of a leading anti-cancer chemotherapy drug, Dr. Dubin considered the anti-competitive effects of patent extensions by these patent holders. He also analyzed the demand for chemotherapy agents and the extent of the market.
- For the Oakland Raiders, Dr. Dubin analyzed the demand for NFL football. He designed an econometric model to test audience effects on individual demand, as well as how aspects of team performance affect demand. This model established that opening season box office performance could have lingering effects for a football team in terms of demand for

tickets.

- For the Department of Justice, Dr. Dubin was the lead economist and expert in a multinational merger analysis of major cardio ultrasound equipment manufacturers. Dr. Dubin utilized nested logit techniques to determine the patterns of substitution for purchasing ultrasound equipment. He then used these models to determine the price consequences for cardio ultrasound equipment that would likely occur as a result of the merger.
- For a manufacturer of agricultural silage bags, Dr. Dubin assessed geographic market definition and considered the joint market power of distribution of agricultural silage bags as evidenced by their boycott of specific manufacturers.
- For a group of corn-syrup manufacturers accused of price-fixing, Dr. Dubin provided econometric rebuttal testimony to demonstrate that the opposing expert did not demonstrate price-fixing.
- For a group of merging railroads, Dr. Dubin developed rebuttal testimony to demonstrate that the opposing expert had overstated the likely diversion from rail to truck.
- For architectural hinge manufacturers accused of price collusion, Dr. Dubin developed a model of hinge pricing based on hundreds of thousands of individual transactions.
- For the U.S. Department of Justice, using scanner data, Dr. Dubin developed econometric models of the demand for white bread. These models were used to demonstrate a proposed merger's likely price consequence.
- For a telecommunications company, Dr. Dubin developed an econometric model of the choice by individuals of market versus self-insurance and showed that the damages resulting from alleged unfair marketing were substantially mitigated.
- In an antitrust action filed in New York, Dr. Dubin assisted in preparing a report assessing the divisional capital asset pricing model (CAPM) betas for

an international copier and printer company.

STRATEGIC AND MANAGEMENT CONSULTING

- For a large refining company, Dr. Dubin developed an econometric model of gasoline demand.
- For Canada Post, Dr. Dubin developed an econometric model of the demand for various mail products and evaluated the simulation of a previously estimated econometric model.
- For a company doing credit card scoring analysis, Dr. Dubin evaluated the financial consequences that losing a sole-supply contract would have on market capitalization.
- For a major bank, Dr. Dubin analyzed the effects of automatic teller machines on the market for travelers checks.
- For the State of California, Dr. Dubin examined the effects of state income tax enforcement.
- For a gas pipeline restructuring under FERC Order 636a, Dr. Dubin developed a model analyzing the competitiveness of various market segments.
- For a gas pipeline, Dr. Dubin analyzed the competitive nature of the market for gas storage.
- For a top-five mail order company, Dr. Dubin analyzed historical purchase and promotion data at the individual level to model retail mail order demand, promotion effectiveness, and purchase behavior over time.
- For a large-scale manufacturer of architectural windows, Dr. Dubin has analyzed a new manufacturing process using structural econometric techniques and has designed an optimal production process.

- For the American Gaming Association, Dr. Dubin assisted in the development of economywide multiplier benefits from the gaming industry.
- For the Canadian Postal Service and Canadian Direct Marketing Association, Dr. Dubin prepared an econometric model of the demand for addressed admail and related complimentary products. This model was used to assess the consequences of a proposed price increase in addressed admail.
- For a major oil-producer in Alaska, Dr. Dubin assisted in developing a model of crude oil pricing and determined the effects of natural gas liquids on crude prices.
- For a major energy company operating in Bolivia, Dr. Dubin analyzed the appropriate capital asset pricing model beta and quantified country risk and project risk.
- For a gas pipeline seeking market-based rates, Dr. Dubin conducted a discounting and elasticity of demand study to demonstrate the workable competitive nature of the market.

NATURAL RESOURCE DAMAGE ASSESSMENT

- For a major mining corporation operating in the State of Montana, Dr. Dubin developed a discrete-choice model of river choice for recreational fishing and calculated the level of damages sustained from the diminished quality of a specific river.
- For the owner of a mining operation in Colorado, Dr. Dubin analyzed a residential pricing model offered as evidence by the plaintiffs in a class-action suit alleging loss of property values due to pollution of a river.
- For several potentially responsible parties in California, Dr. Dubin developed an econometric model of commercial fishing and determined the magnitude of potential damages from the effects of alleged ocean pollution.
- For a major oil company operating in the State of Texas, Dr. Dubin analyzed the level of damages sustained to property holders due to proximity

to a toxic waste site.

- For several chemical companies operating in the state of Massachusetts, Dr. Dubin reanalyzed a property value-pricing model offered as evidence by the U.S. government in a superfund suit alleging damages from the pollution of a harbor near Boston.
- In litigation involving a superfund site in Los Angeles, Dr. Dubin assisted defense counsel in deposing plaintiff's expert economic witnesses regarding the design and findings of a CVM survey utilized to compute non-use damages. Dr. Dubin assisted in critiquing the CVM survey design methodology and in proposing and redesigning the survey.
- For a major electronic manufacturer operating in Phoenix, Arizona, Dr. Dubin assisted in the development of hedonic pricing regression models to measure the affect of ground water contamination on residential housing prices.

SURVEY RESEARCH

- For the City of Los Angeles, Dr. Dubin analyzed the LAPD's use of force reports. He accomplished this using stratified sampling methods across the various reporting districts in Los Angeles.
- Dr. Dubin assisted lawyers for merging railroads in determining whether a proposed merger would affect hazardous materials shipments. Dr. Dubin used sampling methods to determine the traffic volume that would have to be sampled in order to produce reliable hazardous material shipment estimates.
- For a major psychiatric hospital in the U.S., Dr. Dubin designed a survey of hospitals in the U.S. to measure patient overcharges.
- For a major food products manufacturer, Dr. Dubin designed a sample for the valuation of inventory and fixed assets.
- Dr. Dubin has analyzed survey results from several national surveys of

individuals (NIECS, SIPP, BPA).

- For a major computer hardware company involved in litigation, Dr. Dubin designed a survey of computer software users regarding their purchase decisions.
- For counsel representing two merging railroads, Dr. Dubin critiqued a well known engineering model of railroad traffic.
- For counsel representing an intervening railroad, Dr. Dubin assisted in preparing discovery and deposition questions of an opposing statistical expert.
- For counsel representing two merging railroads, Dr. Dubin has performed a statistical sampling of traffic movements in order to measure potential divertible traffic.
- For the Los Angeles Police Department, Dr. Dubin developed statistical random samples of specific police activity in connection with the consent degree between LAPD and the Department of Justice.

UTILITY MERGERS

- In several proposed mergers of electric and gas utilities, Dr. Dubin explored and analyzed the projected synergies associated with the merger of two utilities. Dr. Dubin projected energy requirements for both stand-alone utilities and the combined utility over a period of ten years. Future capital requirements and savings resulting from the merger were calculated and projected over a ten-year period for both the merged and stand-alone scenarios.
- Dr. Dubin developed the BEARS and BULLS Merger model to analyze potential synergy savings and pro-forma balance sheets for proposed utility mergers. Dr. Dubin has applied this model in several utility merger cases.

CIVIL LITIGATION

- For the Internal Revenue Service, Dr. Dubin implemented measures of shareholder common control from voluminous monthly shareholder data covering a five-year period.
- Dr. Dubin assisted in determining the appropriate refund level due to the California Independent System Operator (CAISO) from their electricity purchases in the California wholesale energy market. Dr. Dubin developed models to calculate the natural gas spot price from published ranges and average prices.
- For several tobacco companies, Dr. Dubin addressed the issue of whether cigarette smoking and asbestos exposure were synergistic in causing lung cancer. Dr. Dubin has analyzed several aspects of the tobacco-asbestos synergy issue to determine whether a combined exposure to smoking and asbestos raise the likelihood, above the individual risks, that an individual will contract lung cancer. Dr. Dubin reanalyzed the American Cancer Society database, and also conducted meta-analyses of early studies.
- For the City of San Francisco, Dr. Dubin developed a model that measured damages resulting from a major bank's failure to escheat municipal bond interest.
- For a major energy supplier in the Northwest, Dr. Dubin developed a model that measured damages resulting from a major bank's failure to escheat bond interest.
- For the City of San Francisco and the State of California, Dr. Dubin developed a model of fee overcharge and hidden interest collected by a large California title company.
- For the state of Alaska, Dr. Dubin developed a model that measured damages resulting from a major bank's failure to escheat bond interest.
- For a defendant bus company, Dr. Dubin calculated the present

discounted value of future medical costs under various life scenarios.

- For the IRS, Dr. Dubin helped develop a shareholder value model that demonstrated that a packaging company's reorganization was a tax sham.
- For a grocery store chain, Dr. Dubin developed models of the demand for hamburgers to demonstrate the stigmatic effect on sales from bad publicity.
- For a gas company operating in the west, Dr. Dubin helped develop an econometric pricing model for carbon dioxide gas.

TESTIMONY

Before the United States Court of Appeals, Ninth Circuit, Writ of Certiorari.
Docket Nos. 06-1457, 06-1462, November, 2007. [pdf \(2.02mb\)](#)

Before the Public Utility Commission of Oregon, Affidavit on behalf of Pacificorp. Docket No. UM 1002, November 19, 2007. [pdf \(449kb\)](#)

Before the United States District Court, District of Maryland Southern Division, Deposition Testimony on behalf of Marriott International, Inc., a Delaware corporation, et al., Case No. 8:05-CV-00787-PJM, October 23, 2007. [pdf \(1140kb\)](#)

Before the Public Utility Commission of Oregon, Trial Testimony on behalf of Pacificorp. Docket No. UM 1002, August 8, 2007.

Before the Public Utility Commission of Oregon, Supplemental Reply Testimony on behalf of Pacificorp. Docket No. UM 1002, July 30, 2007. [pdf \(620kb\)](#)

Before the Eighth Judicial District Court, Clark County, Nevada, Trial Testimony on behalf of Advanced Medical Products, Inc. Case No. A449091, January 17, 2006.

Before the Eighth Judicial District Court, Clark County, Nevada, Deposition Testimony on behalf of Advanced Medical Products, Inc. Case No. A449091, January 15, 2006. [pdf \(254kb\)](#)

Before the United States District Court, Central District of California, Deposition Testimony on behalf of Castaic Lake Water Agency; Newhall County Water District, et al., Case No. CV00-12613 AHM RZx, December 12, 2006. [pdf \(4](#)

[mb\)](#)

Before the Eighth Judicial District Court, Clark County, Nevada, Deposition testimony on behalf of Advanced Medical Products, Inc. NRCP Rule 16.1(a)(2)(B) in Case No. A449091 Consolidated with Case Nos. A452332, A482194 & A49259, November 15, 2006. [pdf \(362 kb\)](#)

Before the Washington Utilities and Transportation Commission, Trial Testimony on behalf of Puget Sound Energy Inc., Docket No. UE-060266, Docket No. UG-060267, September 20, 2006. [pdf \(51.8kb\)](#)

Before the Washington Utilities and Transportation Commission, Prefiled Rebuttal Testimony on behalf of Puget Sound Energy Inc., Docket No. UE-060266, Docket No. UG-060267, August 26, 2006. [pdf \(95.1kb\)](#)

Before the United States District Court, District of Maryland Southern Division, Deposition Testimony on behalf of Marriott International, Inc., a Delaware corporation, et al., Case No. 8:05-CV-00787-PJM, February 24, 2006. [pdf \(1.11 mb\)](#)

Before the Superior Court of the State of California, County of Orange County - Central Justice Center, Deposition Testimony on behalf of Marilyn Miglin, an Individual, and Duke Miglin, an Individual, January 9, 2006. [pdf \(816kb\)](#)

Before the Washington Utilities and Transportation Commission, Trial Testimony on behalf of Puget Sound Energy, Inc., Docket No. UG-040640, Docket No. UE-040641, December 15, 2004. [pdf \(373kb\)](#)

Before the Washington Utilities and Transportation Commission, Trial Testimony on behalf of Puget Sound Energy, Inc., Docket No. UG-040640, Docket No. UE-040641, December 14, 2004. [pdf \(164kb\)](#)

Before the Washington Utilities and Transportation Commission, Prefiled Rebuttal Testimony on behalf of Puget Sound Energy, Inc., Docket No. UG-040640, Docket No. UE-040641, November 3, 2004. [pdf \(243kb\)](#)

Before the United States Bankruptcy Court, Southern District of New York, Trial Testimony on behalf of At Home General Unsecured Creditors Trust, Case No. 04-10156 (BRL), July 19, 2004. [pdf \(606 kb\)](#)

Before the United States Bankruptcy Court, Southern District of New York, Deposition Testimony on behalf of At Home General Unsecured Creditors Trust Case No. 04-10156 (BRL), June 15, 2004. [pdf \(1.14mb\)](#)

Before the Washington Utilities and Transportation Commission, Prefiled Direct Testimony on behalf of Puget Sound Energy, Inc., Docket No. UG-040640, Docket No. UE-040641, April 5, 2004. [pdf \(232 kb\)](#)

Before the Superior Court of the State of California, Sacramento County, Trial Testimony on behalf of the Oakland Raiders in City of Oakland, et al. v. Oakland Raiders, May 21–22, 2003. [pdf \(547kb\)](#)

Before the Superior Court of the State of California, Sacramento County, Deposition Testimony on behalf of the Oakland Raiders in City of Oakland, et al. v. Oakland Raiders, February 25, 2003. [pdf \(1.14mb\)](#)

Before the Superior Court of Alaska, Third Judicial District, Trial Testimony on behalf of the State of Alaska of Alaska Inter-Tribal Council v. State of Alaska, April 11, 2002.

Before the United States District Court, Northern District of California, San Francisco Division, Deposition Testimony on behalf of the City and County of San Francisco, Case No. C-99-0020 WHA and C-99-0193 WHA, March 13, 2002.

Before the United States District Court, District of Puerto Rico, Deposition Testimony on behalf of Puerto Rico Telephone Company, Inc., Civil Action No. 01-1832, February 6, 2002. [pdf \(706kb\)](#)

Before the Superior Court for the State of Alaska, Third Judicial District at Dillingham, Deposition Testimony on behalf of the State of Alaska, Case No. 3DI-99-113 Civil, February 9, 2001. [pdf \(578 kb\)](#)

Before the Alameda County Superior Court, Trial Testimony on behalf of Oliver, Case No. 784492-6, May 8, 9, 10, 11, and 18, 2000.

Before the United States District Court, District of New Jersey, Deposition Testimony on behalf of Baker Norton Pharmaceuticals, Inc., Civil Action No. 98 CV 1412 (WHW), February 11, 2000. [pdf \(2.4mb\)](#)

Before the Alameda County Superior Court Case, Deposition Testimony on behalf of Oliver, No. 784492-6, September 7, 1999. [pdf \(1.68mb\)](#)

Before the Alameda County Superior Court, Deposition Testimony on behalf of Oliver, Case No. 784492-6, August 5, 1999. [pdf \(898kb\)](#)

Before the United States District Court, Southern District of New York, Deposition Testimony on behalf of Mabuchi Motor America Corp., CIV. 73(JES), June 8, 1999. [pdf \(1.37mb\)](#)

Before the United States District Court, Central District of Illinois, Peoria Division, Deposition Testimony on behalf of Archer Daniels Midland et al., March 11, 1999. [pdf \(1.20mb\)](#)

Before the Surface Transportation Board, Applicants' Rebuttal (Volume 1B of 2) on behalf of Canadian National Railway Company, et. al., Finance Document No. 33556. December 16, 1998. [pdf \(394 kb\)](#)

Before the United States District Court, Southern District of New York, Deposition Testimony on behalf of Mabuchi Motor America Corp., CIV. 7377(JES), September 11, 1998. [pdf \(1.30mb\)](#)

Before the Surface Transportation Board, Verified Statement on behalf of Conrail, January 1997. [pdf \(219 kb\)](#)

Before the Federal Energy Regulatory Commission, Trial Testimony on behalf of Koch Gateway Pipeline Company, Docket No. RP95-362-000, October 6 and 7, 1996. [pdf \(7.01mb\)](#)

Before the Federal Energy Regulatory Commission, Prepared Rebuttal Testimony on behalf of Koch Gateway Pipeline Company, Docket No. RP95-362-000, June 10, 1996. [pdf \(545kb\)](#)

Before the Federal Energy Regulatory Commission, Prepared Direct Testimony on behalf of Koch Gateway Pipeline Company, Docket No. RP95-362-000, June 26, 1995. [pdf \(703 kb\)](#)

Before the U.S. Tax Court, Trial Testimony on behalf of Nestlé Holding, Inc., Tax Court Docket No. 21562-90, April 25, 1994. [pdf \(355kb\)](#)

Comments before the Department of Interior, July 22, 1993, Advance Notice of Proposed Rulemaking (43 CFR Part II) Natural Resource Damage Assessment Regulations Type B Rule, with C. Cicchetti, September 22, 1993. [pdf \(115kb\)](#)

Before the United States District Court, Southern District of New York, Deposition Testimony on behalf of Mabuchi Motor America Corp., CIV. 73(JES), February 25, 1993. [pdf \(684kb\)](#)

Before the Federal Energy Regulatory Commission, Affidavit on behalf of United Gas Pipeline Company, Docket No. RS92-26-000, October 29, 1992. [pdf \(639kb\)](#)

EXPERT REPORTS

Before the Public Utility Commission of Oregon, Declaration on behalf of Pacificorp. Docket No. UM 1002, November 19, 2007. [pdf \(449kb\)](#)

Before the Superior Court of the State of California, Los Angeles County,

Declaration on behalf of Dr. Michael Howard Roth, v. California State University, Los Angeles, California, August 18, 2006. [pdf \(59.4kb\)](#)

Expert Report for Advanced Medical Products, Inc. NRCP Rule 16.1(a)(2)(B) in Case No. A449091 Consolidated with Case Nos. A452332, A482194 & A49259, July 19, 2006. [pdf \(65.6kb\)](#)

Before the United States District Court, District of Maryland, Southern District, Expert Report on behalf of Marriott International, Inc., Civil Action No. 8:05-cv-00787-PJM, October 6, 2005. [pdf \(1.38mb\)](#)

Before the United States District Court, Central District of California, Expert Report on behalf of Agron, Inc., Case No. CV 03-05872-MMM(KWKx), November 2004. [pdf \(998kb\)](#)

Before the United States Bankruptcy Court, Southern District of New York, Expert Report on behalf of At Home General Unsecured Creditors Trust Case No. 04-10156 (BRL), June 15, 2004. [pdf \(606kb\)](#)

Before the United States Bankruptcy Court, Northern District of California, San Francisco Division, Preliminary Expert Witness Report on behalf of At Home Corporation, Case No. 01-32495-TC, July 29, 2004. [pdf \(1.1mb\)](#)

Before the Superior Court of the State of California for the County of Napa, Affidavit on Behalf of Kay-Bee Toy, Inc., et al., Case No. 26-15615, July 23, 2002. [pdf \(256kb \)](#)

Affidavit on behalf of the Department of Justice regarding the acquisition of Agilent HSG by Philips, June 10, 2002. [pdf \(744kb\)](#)

Before the United States District Court, Northern District of California, San Francisco Division, Rebuttal Report on behalf of the City and County of San Francisco, with R. Douglas Rivers, Case No. C-99-0020 WHA and C-99-0193 WHA, March 13, 2002. [pdf \(162kb\)](#)

Before the United States District Court, District of Puerto Rico, Expert Report on behalf of Puerto Rico Telephone Company, Inc., Civil Action No. 01-1832, February 6, 2002. [pdf \(3.04mb\)](#)

In The Superior Court for the State of Alaska Third Judicial District at Dillingham, Surrebuttal Testimony on behalf of the State of Alaska, Case No. 113 CI, July 3, 2001. [pdf \(201kb\)](#)

Before the Superior Court for the State of Alaska, Third Judicial District at Dillingham, Expert Report on behalf of the State of Alaska, Case No. 3DI-99-113 Civil, February 9, 2001. [pdf \(2.86mb\)](#)

Before the Superior Court of the State of California, County of Sacramento, Expert Report and Exhibits on behalf of the Oakland Raiders, June 2000. [pdf \(1.26mb\)](#)

Before the United States District Court, District of New Jersey, Expert Report on behalf of Baker Norton Pharmaceuticals, Inc., Civil Action No. 98 CV 1412 (WHW), February 11, 2000. [pdf \(5.53mb\)](#)

Before the United States District Court, District of Minnesota, Fourth Division, Expert Report on behalf of Up North Plastics, Inc., Poly-America, Inc., and Ag-Bag International Limited, June 1999. [pdf \(1.62mb\)](#)

Before the United States District Court, Central District of Illinois, Peoria Division, Expert Report, "A Review of Professor Williams Ed. Whitelaw's 'A Study of Prices of High Fructose Corn Syrup-42 and Glucose Corn Syrup'" on behalf of Archer Daniels Midland et al., February 3, 1999. [pdf \(2.2mb\)](#)

Before the United States District Court, Southern District of New York, Expert Report on behalf of Mabuchi Motor America Corp., 88 Civ. 737 (JES), November 25, 1997. [pdf \(7.96mb\)](#)

Before the U. S. Tax Court, Expert Report on behalf of Nestle Holdings, Inc., Tax Court Docket No. 21562-90, January 24, 1994. [pdf \(977kb\)](#)

OTHER REPORTS

"Servicio de Asesoría en el Análisis de la Demanda Residencial de Electricidad e Hidrocarburos," with Dr. Carlos Walter Rebledo, prepared for the Expertos en Regulación de Servicios Públicos, February 8, 2006. [pdf \(831kb\)](#)

"Criminal Investigation Enforcement Activities and Taxpayer Noncompliance," submitted to Internal Revenue Service Criminal Investigation, February 10, 2004. [pdf \(1.13mb\)](#)

"Stratified Random Sample for Non-Categorical Use of Force Reports," with C. Cicchetti and E. Cotton, prepared for the Los Angeles Police Department, September 10, 2001. [pdf \(633kb\)](#)

Statistical Analysis of Errors and Lost Charges for TENET Home Care Facilities, January 12, 1996. [pdf \(337kb\)](#)

"Financial Analysis of Addressed Admail," May 1996. [pdf \(2.08mb\)](#)

"Bears and Bulls Synergy Model Source Code," Dubin/Rivers Research, March 7, 1996. [pdf \(954kb\)](#)

“The Economic Consequence of Independent Film Making,” with Cicchetti, Peale, Boedeker, Truitt, prepared for the American Film Marketing Association, January 1995. [pdf \(622kb\)](#)

“Statistical Analysis of Errors and Lost Charges for TENET Home Care Facilities,” June 7, 1995. [pdf \(481kb\)](#)

“Competition and Regulation in the Natural Gas Transportation Industry,” with C. Cicchetti and C. Long, circa 1995. [pdf \(885kb\)](#)

“National Medical Enterprises, Inc., Psychiatric Division Review,” September 14, 1994. [pdf \(370kb\)](#)

“An Introduction to Discrete Choice Modeling and its Applications to Load Forecasting,” prepared for Canadian Electrical Association Conference, Nova Scotia, Canada, May 18, 1993. [pdf \(4.7mb\)](#)

“Preliminary Analysis of the Potential Natural Resource Damage to Commercial Fishing,” prepared for the Los Angeles Harbor Counsel, July 12, 1991. [pdf \(1.15mb\)](#)

“Analysis of Market Expansion and Business Diversion in Instant Photography Attributable to the Entry of Eastman Kodak from 1976-1985,” with T. Bresnahan, April 20, 1989. [pdf \(885kb\)](#)

“Detecting Cartel Behavior from Price Data,” Architectural Hinges, with R. Preston McAfee, circa 1988. [pdf \(642kb\)](#)

“A Report on Freshmen Admissions at Caltech: Who's Admitted, Who Comes, and Why,” with R. Noll, circa 1983. [pdf \(450kb\)](#)

PROFESSIONAL ACTIVITIES

1996–present	Co-Founding Partner, Pacific Economics Group
1993–1996	Director of Statistics and Econometric Analysis, Arthur Andersen Economic Consulting
1992–1993	Senior Economist, Arthur Andersen Economic Consulting
1989–1992	Senior Advisor, Putnam, Hayes & Bartlett, Inc.

ACADEMIC APPOINTMENTS

2005–present	Visiting Professor of Economics, University of California, Santa Barbara
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2005–2007	Professor of Economics, California Institute of Technology
2005	Visiting Professor of Economics, Occidental College
1988–2005	Associate Professor of Economics, California Institute of Technology
1982–1988	Assistant Professor of Economics, California Institute of Technology

EDITORIAL BOARDS

1986–1991	<i>The Energy Journal</i>
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ADVISORY POSITIONS

2004	Technical Advisor under Rule 706 of the Federal Rule of Civil Procedure to advise a Los Angeles Federal District Court in matters of statistics.
2001	Member, California State Auditors, Bureau of State Audits
1991	Advisory Panel on Biotechnology Opportunities, National Science Foundation, Member
1990	Lawrence Berkeley Laboratory Manufacturer Input Model for Department of Energy
1988–1995	University of California, University-Wide Energy Research Group
1987	California Energy Commission
1985	National Research Council, Committee on Behavior and Social Aspects of Energy Consumption and Production
1985	Lawrence Berkeley Laboratory, Energy Analysis Program
1984	Oakridge National Laboratory, Energy Policy Division
1984	Southern California Air Quality Management Board

PUBLICATIONS

Books

The California Electricity Crisis: What, Why, and What's Next , with Charles J. Cicchetti and Colin M. Long, Massachusetts: Springer Publishing Company, 2004. [pdf \(1,453 kb\)](#)

[Chapter 1](#): Introduction

[Chapter 2](#): Power Production Economics

[Chapter 3](#): Principles of Traditional Regulation

[Chapter 4](#): Reconciling Marginal Cost and Revenue Requirements
[Chapter 5](#): Competitive Wholesale Markets for Electricity
[Chapter 6](#): California's Market Design: an Initial Success Followed by a "Perfect Storm"
[Chapter 7](#): Design Flaws and a Worsening Crisis
[Chapter 8](#): Testable Hypothesis
[Chapter 9](#): Survey of Electricity Models for California
[Chapter 10](#): An Economic Analysis of Natural Gas Price Movements During the Crisis
[Chapter 11](#): An Economic Analysis of Electricity Prices in California
[Chapter 12](#): Market Manipulation
[Chapter 13](#): Gaming and Cheating
[Chapter 14](#): Market Monitoring and Initial Regulatory Response
[Chapter 15](#): Refunds and Mitigation
[Chapter 16](#): California Responds
[Chapter 17](#): Handicapping Winners
[Chapter 18](#): Conclusion: Wrapping Up and Lessons Learned

Empirical Studies in Applied Economics, Boston, Massachusetts: Springer Publishing Company, 2001. [pdf \(1,040 kb\)](#)

[Chapter 1](#): The Revealed Market Power of a Natural Gas Pipeline
[Chapter 2](#): The Demand For NFL Football
[Chapter 3](#): Detecting and Measuring Shifts in the Demand for Direct Mail
[Chapter 4](#): Valuation of a Technology Patent—Scope, Duration, and Royalty
[Chapter 5](#): Statistical Analysis of the Additive and Multiplicative Hypotheses of Multiple Exposure Synergy for Cohort and Case-Control Studies
[Chapter 6](#): Tests of the Additive and Multiplicative Hypotheses of Multiple Exposure
[Chapter 7](#): Concentration and Competition in the Chemotherapy Drug Market
[Chapter 8](#): The Allocation of Police Services in Rural Alaska
[Chapter 9](#): Financial Market Reaction to the Fast Food Hamburger Health Scare of 1993

Studies in Consumer Demand—Econometric Methods Applied to Market Data. Boston, Massachusetts: Springer Publishing Company, 1998. [pdf \(2,792 kb\)](#)

[Chapter 1](#): The Demand for Addressed Admail and Complementary Products in Canada
[Chapter 2](#): The World Demand for Fractional Horsepower Direct-Current Motors
[Chapter 3](#): Estimation and Identification of the Worldwide Demand for Acetic Acid
[Chapter 4](#): The Demand for Branded and Unbranded Products—An Econometric Method for Valuing Intangible Assets
[Chapter 5](#): The Demand for Recreational Fishing in Montana
[Chapter 6](#): The Demand for Commercial Fishing in California
[Chapter 7](#): The Demand for Cameras by Consumers—A Model of Purchase Type Choice, and Brand Choice
[Chapter 8](#): The Demand for Transportation Services in Natural Gas Markets—The Market Power of a Natural Gas Pipeline

Consumer Durable Choice and the Demand for Electricity. New York-Amsterdam: North-Holland Publishing Company, 1985. [pdf \(6,043 kb\)](#).
Reviewed in: *Journal of Political Economy* 94 (1986) [pdf \(281 kb\)](#);
Journal of Economic Literature 25 (1987) [pdf \(131 kb\)](#);
and *Journal of the American Statistical Association* 82 (1987). [pdf \(66 kb\)](#)

[Chapter 1](#): Consumer Durable Choice and Utilization
[Chapter 2](#): A Heating and Cooling Load Model for Single-Family Detached Dwellings
[Chapter 3](#): Estimation of Nested Logit Model for Appliance Holdings
[Chapter 4](#): Rate Structure and Price Specification in the Demand for Electricity
[Chapter 5](#): Two-Stage Estimation Methods for the Switching Regime Model with Known

Regimes

[Chapter 6](#): Estimation of the Demand for Electricity and Natural Gas from Billing Data

[Appendix A](#)

[Appendix B](#)

Articles

“Mid-range, Average, and Hourly Estimates of Heating Degree Days: Implications for Weather Normalization of Energy Demand,” with Villamor Gamponia, April 2007 [pdf \(185kb\)](#)

“An Integrated Engineering-Econometric Analysis of Residential Balance Point Temperatures,” forthcoming *Energy Economics*, 2007. [pdf \(419 kb\)](#)

“Valuing Intangible Assets with a Nested Logit Market Share Model,” *Journal of Econometrics*, Vol. 139, No. 2, August 2007: 285-302. [pdf \(323 kb\)](#)

“Criminal Investigation Enforcement Activities and Taxpayer Noncompliance,” *Public Finance Review*, Vol. 35, No. 4, July 2007: 500-529 [pdf \(417 kb\)](#)

“A Quasi-Comparable Approach to Reasonable Royalty Determination,” in *Economic Damages in Intellectual Property*, Daniel Slottje, editor, John Wiley & Sons, New York: New York, 2006. [pdf \(235 kb\)](#)

“An Econometric Method for Determining the Goldscheider Fraction and its Applicable Base,” in *Economic Damages in Intellectual Property Matters*, Daniel Slottje, editor, John Wiley & Sons, New York: New York, 2006. [pdf \(264 kb\)](#)

“Criminal Investigation Enforcement Activities and Taxpayer Noncompliance,” Internal Revenue Service *Statistics of Income*, June 2004. [pdf \(144 kb\)](#)

“Initial Virological and Immunologic Response to Highly Active Antiretroviral Therapy Predicts Long-Term Clinical Outcome,” with Christina Kitchen, Scott Kitchen, and Michael Gottlieb, *European Journal of Clinical Microbiology and Infectious Diseases*, Vol. 33, (2001): 466–472. [pdf \(156 kb\)](#)

“Energy Deregulation: The Benefits of Competition were Undermined by Structural Flaws in the Market, Unsuccessful Oversight, and Uncontrollable Competitive Forces,” with Charles J. Cicchetti, Jon Hockenyos, Colin M. Long, and J.A. Wright. California State Auditor, Bureau of State Audits, Sacramento, California, March 2001. [pdf \(504 kb\)](#)

“Comparing Absentee and Precinct Voters: Voting on Direct Legislation,” with Gretchen A. Kalsow, *Political Behavior*, Vol. 18, No. 2, June 1996: 393–411. [pdf \(1,762 kb\)](#)

“Comparing Absentee and Precinct Voters: A View Over Time,” with Gretchen A. Kalsow, *Political Behavior*, Vol. 18, No. 2, June 1996: 369–392. [pdf \(2,148 kb\)](#)

“Testing Minority Preferences in Broadcasting,” with Matthew Spitzer, *California Law Journal*, Vol. 68, No. 4, May 1995: 841–884 [pdf \(1,402 kb\)](#)

“A Microeconomic Analysis of Risk Aversion and the Decision to Self-Insure,” with Charles J. Cicchetti, *Journal of Political Economy*, 102 (1994): 169–186. [pdf \(526 kb\)](#)

“Experimental Estimates of the Impact of Wage Subsidies,” with R. Douglas Rivers, *Journal of Econometrics* 56 (1993): 219–242. [pdf \(752 kb\)](#)

“Voting on Growth Control Measures: Preferences and Strategies,” with D. Roderick Kiewiet and Charles Noussair, *Economics and Politics* 4 (1992): 191–213. [pdf \(509 kb\)](#)

“State Income Tax Amnesties: Causes,” with Michael J. Graetz and Louis L. Wilde, *Quarterly Journal of Economics* 107 (August 1992): 1057–1070. [pdf \(474 kb\)](#)

“The Demand for Tax Return Preparation Services,” with Michael J. Graetz, Michael A. Udell, and Louis L. Wilde, *The Review of Economics and Statistics* 74 (1992): 75–82. [pdf \(356 kb\)](#)

“The Changing Face of Tax Enforcement, 1978–1988,” with Michael J. Graetz and Louis L. Wilde, *The Tax Lawyer* 43 (1990): 893–914. Reprinted in R. Westin, R. Hishon, and B. Green, eds. *Criminal Tax Prosecutions*. Anderson Publishing Company (1991). [pdf \(678 kb\)](#)

“The Effect of Audit Rates on the Federal Individual Income Tax, 1977–1986,” with Michael J. Graetz and Louis L. Wilde, *National Tax Journal* 43 (1990): 395–409. [pdf \(3,284 kb\)](#)

“Selection Bias in Linear Regression, Logit and Probit Models,” with R. Douglas Rivers, *Sociological Methods and Research* 18 (1989/1990). Reprinted in J. Fox and S. Long, eds. *Modern Methods of Data Analysis*. Newbury Park, California: Sage Publications (1990): 359–91. [pdf \(388 kb\)](#)

“Risk and Reactor Safety Systems Adoption,” with Geoffrey S. Rothwell, *Journal of Econometrics* 42 (1989): 202–17. [pdf \(249 kb\)](#)

“The Report of the United States to the International Fiscal Association 43 Congress: Administrative and Compliance Costs of Taxation,” with Michael J. Graetz and Louis L. Wilde, *Cahiers de Droit Fiscal International (Studies on*

International Fiscal Law) Kluwer, The Netherlands 74b (1989): 310-47. [pdf \(1,240 kb\)](#)

“The Distributional Effects of the Federal Energy Tax Act,” with Steven E. Henson, *Resources and Energy* 10 (1988): 192–211. [pdf \(661 kb\)](#)

“How Markets for Impure Public Goods Organize: The Case of Household Refuse Collection,” with Peter Navarro, *Journal of Law, Economics and Organization* 4 (1988): 217–41. [pdf \(832 kb\)](#)

“An Empirical Analysis of Federal Income Tax Auditing and Compliance,” with Louis L. Wilde, *National Tax Journal* 16 (1988): 61–74. [pdf \(584 kb\)](#)

“An Engineering/Econometric Analysis of Seasonal Energy Demand and Conservation in the Pacific Northwest,” with Steven E. Henson, *Journal of Business and Economic Statistics* 6 (1988): 121–34. [pdf \(745 kb\)](#)

“Are We a Nation of Tax Cheaters? New Econometric Evidence on Tax Compliance,” with Michael J. Graetz and Louis L. Wilde, *American Economic Review, Papers and Proceedings* 77 (1987): 240–45. [pdf \(89 kb\)](#)

“Block Switching in Demand Subject to Declining Block Rates—A New Approach,” *International Association of Energy Economists, Papers and Proceedings of the Eighth Annual North American Conference* (May 1987): 243–47. [pdf \(215 kb\)](#)

“A Nested Logit Model of Space and Water Heat System Choice,” *Marketing Science* 5 (1986): 112–24. [pdf \(589 kb\)](#)

“Price Effects of Energy Efficient Technologies: A Study of Residential Demand for Heating and Cooling,” with Allen K. Miedema and Ram V. Chandran, *Rand Journal of Economics* 17 (1986): 310–25. [pdf \(655 kb\)](#)

“Will Mandatory Conservation Promote Energy Efficiency in the Selection of Household Appliance Stocks?” *The Energy Journal* 7 (1986): 99–118. [pdf \(504 kb\)](#)

“An Econometric Analysis of Residential Electric Appliance Holdings and Consumption,” with Daniel L. McFadden, *Econometrica* 52 (1984): 345–62. Reprinted in Stigum, B. ed. *Econometrics and the Philosophy of Economics: Theory—Data Confrontation in Economics*, Princeton University Press, 2002. [pdf \(433 kb\)](#)

“Regulatory Climate and the Cost of Capital,” with Peter Navarro, in *Regulatory Reform and Public Utilities*. M. Crew, ed. Lexington, Massachusetts: Lexington Books (1982): 141–66. [pdf \(551 kb\)](#)

COMPUTER SOFTWARE

SST—Statistical Software Tools Version 3.0, ©1985–2007 with R. Douglas Rivers, “Statistical Software Tools Reference Manual and User’s Guide,” with R. Douglas Rivers, (1990). [pdf\(7,051kb\)](#). Online at <http://www.hss.caltech.edu/~jad/sst/html/main.help.sst.html>.

WORKING PAPERS

“Statistical Analysis of the Additive and Multiplicative Hypotheses for Cohort and Case-Control Studies,” California Institute of Technology, Social Science Working Paper, July 1999. [pdf \(870 kb\)](#)

“Tax Return Preparers and Tax Evasion,” with Gretchen A. Kalsow and Michael A. Udell, California Institute of Technology, Social Science Working Paper No. 1031, April 1998. [pdf \(231 kb\)](#)

“Participation in Direct Legislation: Evidence from the Voting Booth,” with Gretchen A. Kalsow, California Institute of Technology, Social Science Working Paper No. 997, January 1997. [pdf \(917 kb\)](#)

“An Aggregate Nested Logit Model of Political Participation,” with Gretchen A. Kalsow. California Institute of Technology, Social Science Working Paper No. 998, January 1997. [pdf \(1,334 kb\)](#)

“Patterns of Voting on Ballot Propositions: A Mixture Model of Voter Types,” with Elisabeth R. Gerber, California Institute of Technology, Social Science Working Paper No. 795, May 1992. [pdf \(1,130 kb\)](#)

“The Use and Misuse of Surveys in Economic Analysis: Natural Resource Damage Assessment Under CERCLA,” with Charles J. Cicchetti and Louis L. Wilde, California Institute of Technology, Social Science Working Paper No. 768, July 1991. [pdf \(1,811\)](#)

“The Heterogeneous Logit Model,” with Langche Zeng, California Institute of Technology, Social Science Working Paper No. 759, February 1991. [pdf \(571 kb\)](#)

“Welfare Economics for Tobit Models,” with Louis L. Wilde, California Institute of Technology, Social Science Working Paper No. 800, January 1991. [pdf \(553 kb\)](#)

REVIEWS, COMMENTS, NOTES, ABSTRACTS

"Salvage in Triple Class Resistant Patients with Raltegravir and Etravirine in a Community Based Practice," with L. S. Newmarch, C. M. Marion , and M. S. Gottlieb, May, 2007. [pdf \(17 kb\)](#)

“The Weather in the Details,” with Villamor Gamponia, *Public Utilities Fortnightly*, November 2006: 22-24. [pdf \(328 kb\)](#)

“Internal Revenue Service Tax Compliance Enforcement: 'Six-Foot Under' or

just 'Lost,'" *Speaking of Economics*, Department of Economics Newsletter, Occidental College, October 28, 2005. [pdf \(51 kb\)](#)

"Market Barriers to Conservation: Are Implicit Discount Rates Too High?" *Proceedings of a POWER Conference: The Economics of Energy Conservation*, University of California Energy Institute (1993): 21–33. [pdf \(593 kb\)](#)

Commentary on "Can Brute Deterrence Backfire? Perceptions and Attitudes in Taxpayer Compliance," by S. Sheffrin and R. Triest, *Why People Pay Taxes: Tax Compliance and Enforcement*, J. Slemrod, ed., Ann Arbor, Michigan: University of Michigan Press (1992). [pdf \(193 kb\)](#)

"The *Real* California Lottery: Your Income Tax," *Engineering & Science* 54 (1990): 3–11. [pdf \(479 kb\)](#)

"Subsidy to Nuclear Power Through Price-Anderson Liability Limit," with Geoffrey S. Rothwell, *Contemporary Policy Issues* 8 (1990): 73–79. [pdf \(210 kb\)](#)

"Safety at Nuclear Power Plants: Economic Incentives under the Price-Anderson Act and State Regulatory Commissions," with Geoffrey S. Rothwell, *The Social Science Journal* 26 (1989): 303–11. [pdf \(340 kb\)](#)

Review of *Qualitative Choice Analysis: Theory, Econometrics, and an Application to Automobile Demand*, by K. Train, *Transportation Research-A* 22A (1988): 233–35. [pdf \(168 kb\)](#)

"Penny-Wise and Pound-Foolish: New Estimates of the Impact of Audits on Revenue," with Michael J. Graetz and Louis L. Wilde, *Tax Notes* 35 (1987): 787–91. [pdf \(316 kb\)](#)

Review of *Markets for Power: Analysis of Electric Utility Deregulation*, by P. Joskow and R. Schmalensee, *Journal of Economic Literature* 22 (1984): 1667–68. [pdf \(88 kb\)](#)

"The Effect of Rate Suppression on Utilities' Cost of Capital," with Peter Navarro, *Public Utilities Fortnightly* 111 (1983): 18–22. [pdf \(247 kb\)](#)

GRANTS

Racial Profiling Within Los Angeles County - Phase II, Haynes Foundation Faculty Fellowship, 2006.

IRS Criminal Investigation Research—Empirical Analysis of the Impact of CI Activities on Taxpayer Compliance, IRS Grant TIRNO-00-D-0039, 2003.

An Economic Analysis of Racial Profiling in Southern California, Haynes Foundation Faculty Fellowship, 2002.

An Economic Analysis of the San Fernando Valley Secession, Haynes Foundation Faculty Fellowship, 2000.

Comparing and Contrasting Absentee and Precinct Voters, Haynes Foundation Faculty Fellowship, 1995.

An Economic Analysis of Welfare Administration, with Louis L. Wilde, National Science Foundation #SES-9113209, 1991–92.

An Economic Analysis of the Rise (and Fall?) of State Lotteries, Haynes Foundation Faculty Fellowship, 1991.

An Empirical Analysis of Income Tax Auditing and Compliance, with Louis L. Wilde, National Science Foundation Grant #SES-8701027, 1987–89.

The Seasonal Demand for Electricity in the Pacific Northwest, with Steven E. Henson, Bonneville Power Administration, DE-AI79-83BP13579, 1985.

The Role of Capital in Public Utility Industries: An Integration of Economic and Financial Effects, with Daniel L. McFadden (P.I.) and Tom C. Cowing, National Science Foundation Grant #SES-8205713, 1983.

EDUCATION

1982	Ph.D., Economics, Massachusetts Institute of Technology
1978	A.B., Economics, University of California, Berkeley, with Highest Honors and Great Distinction in General Scholarship

HONORS AND AWARDS

Econometric Society Frisch Medal, 1986.

Departmental Citation, U.C. Berkeley, Department of Economics, awarded to the author of the best undergraduate honors thesis in Economics, 1978.

CURRENT RESEARCH

Discrete-choice econometrics, energy economics, ballot proposition voting, tax compliance.