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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.

Senior Partner

San Francisco, CA 1993 – Present

Dr. Woo specializes in energy economics, applied microeconomics and applied finance. With over 30 years of experience in the electricity industry, he has testified and prepared expert testimony for use in regulatory and legal proceedings in California, British Columbia and Ontario. He has also filed declaration for and testified in arbitration in connection to contract dispute. Dr. Woo's current research includes electricity deregulation, procurement, risk management, demand response and rationing, avoided cost estimation, integrated resource planning, and value of service reliability.

Dr. Woo has published over 130 refereed articles that appear in such scholarly journals as *Energy Policy, Energy Law Journal, The Energy Journal, Energy, Electricity Journal, Resource and Energy Economics, Energy Economics, IEEE Transactions on Power Systems, IEEE Transactions on Smart Grid, Water Resources Research, Managerial and Decision Economics, OMEGA, Journal of Regulatory Economics, Journal of Public Economics, Quarterly Journal of Economics, Economics Letters, Journal of Business Finance and Accounting, and Pacific Basin Finance Journal.*

Recognized by *Who's Who in America*, Dr. Woo is a senior fellow of the United States Association for Energy Economics; an editorial board member of *Energy* and their guest editor of a 2006 special issue on electricity market reform and deregulation and a 2010 special issue on demand response resources; an editorial board member of *The Energy Journal* and has served as their guest editor of a 1988 special issue on electricity reliability; and an editorial board member of *Energy Policy* and their guest editor of a 2011 special issue on renewable energy. Dr. Woo received a Ph.D. in Economics from the University of California at Davis.

CITY UNIVERSITY OF HONG KONG

Associate Professor, Department of Economics and Finance

Hong Kong, China 1991 – 1993

Dr. Woo analyzed the economic impacts of supply shortage on consumers, resulting in a series of publications on water and electricity rationing. He also performed specification tests of econometric models of stock returns. As a consultant, he performed marginal costing, demand-side-management evaluation and reliability planning which led to several publications on local integrated resource planning and T&D costing.

ANALYSIS GROUP, INC.

Senior Associate

San Francisco, CA 1987 – 1991

Dr. Woo was responsible for applied microeconomics, outage cost estimation, reliability planning, and electricity pricing. He was the primary consultant to several utilities for outage cost estimation and reliability differentiation. His extensive publications in these two areas are widely cited by other

researchers. He also performed economic analysis of mergers and acquisition with a primary focus on the anti-trust aspect of market power, with the resulting findings filed with both state and federal courts.

PACIFIC GAS AND ELECTRIC COMPANY

San Francisco, CA

Rate Economist

1985 - 1987

Dr. Woo revamped PG&E's research on outage cost estimation whose findings appear in a special issue of The Energy Journal focusing on electricity reliability. He also participated in PG&E's preparation of the General Rate Cases.

SACRAMENTO MUNICIPAL UTILITIES DISTRICT

Sacramento, CA

Econometrician

1984 - 1985

Dr. Woo was responsible for demand estimation and load forecasting. The results from his study guided SMUD's resource planning.

PACIFIC GAS AND ELECTRIC COMPANY

San Francisco, CA

Rate Economist

1982 - 1984

Dr. Woo was responsible for time-of-use (TOU) demand analysis and TOU pricing mandated by the CPUC. This work resulted in a performance award from PG&E and several publications.

CALIFORNIA ENERGY COMMISSION

Sacramento, CA

Research Assistant

1978 - 1982

Dr. Woo was the primary author of the life cycle costing model used by the CEC to analyze solar energy and other DSM measures. He testified before the CPUC on the economics of solar financing.

Education

University of California

Davis, CA

Ph.D. in Economics

Queen's University

Kingston, Ontario

M.A. in Economics

Concordia University

B. Comm. in Economics

Montreal, Quebec

Languages

Chinese

Citizenship

United States

RESEARCH

Books and special issues

- 1. Cheung, Y.L., Y.S. Cheng and C.K. Woo (2016) Hong Kong's Global Financial Centre and China's Development, Routledge, forthcoming.
- 2. Woo, C.K., L.C.H. Chow and T. Owen, editors (2011) Special Issue on Renewable Energy, Energy Policy, 39:7.
- 3. Woo, C.K. and L. Greening, editors (2010) Special Issue on Demand Response Resources, Energy, 35.
- 4. Woo, C.K., L.C.H. Chow and N. Lior, editors (2006) Special Issue on Electricity Market Reform and Deregulation, Energy, 31:6-7.
- 5. Munasinghe, M., C.K. Woo and H.P. Chao, editors (1988) Special Electricity Reliability Issue, The Energy Journal, 9.

Refereed Publications

Electricity Deregulation

- 1. Gal, N., I. Milstein, A. Tishler and C.K. Woo (2017) "Fuel Cost Uncertainty, Capacity Investment and Price in a Competitive Electricity Market," Energy Economics, forthcoming.
- 2. Zarnikau, J., C.K. Woo and R. Baldick (2014) "Did the Introduction of a Nodal Market Structure Impact Wholesale Electricity Prices in the Texas (ERCOT) Market?" Journal of Regulatory Economics, 45, 194-208.
- 3. Orans, R., A. Olson, J. Moore, J. Hargreaves, R. Jones, G. Kwok, F. Kahrl and C.K. Woo (2013) "Energy Imbalance Market Benefits in the West: A Case Study of PacifiCorp and CAISO," The Electricity Journal, 26(5), 26-36.
- 4. Tishler, A. and C.K. Woo (2010) "Principles of Regulation in Electricity Markets," The Economic Quarterly (in Hebrew), 57:1, 77-97.
- 5. Woo, C.K., I. Horowitz and A. Tishler (2009) "A Critical Assessment of the Macau SAR Government's Proposed Post-2010 Regulatory Regime," Electricity Journal, 22:3, 87-96.
- 6. Woo, C.K. and J. Zarnikau (2009) "Will Electricity Market Reform Likely Reduce Retail Rates?" Electricity Journal, 22:2, 40-45.
- 7. Tishler, A., I. Milstein and C.K. Woo (2008) "Capacity Commitment and Price Volatility in a Competitive Electricity Market," Energy Economics, 30, 1625-1647.

- 8. Tishler, A., J. Newman, I. Spekterman and C.K. Woo (2008) "Assessing the Options for a Competitive Electricity Market in Israel," Utilities Policy, 16, 21-29.
- 9. Tishler, A. and C.K. Woo (2007) "Is Electricity Deregulation Beneficial to Israel?" International Journal of Energy Sector Management, 1(4): 322-341.
- 10. Woo, C.K., I. Horowitz and A. Tishler (2006) "A Critical Assessment of the Hong Kong Government's Proposed Post-2008 Regulatory Regime for Local Electricity Utilities," Energy Policy, 34, 1451-1456. (Lead article)
- 11. Woo, C.K., A. Olson, I. Horowitz and S. Luk (2006) "Bi-directional Causality in California's Electricity and Natural-Gas Markets," Energy Policy, 34:15, 2060-2070.
- 12. Woo, C.K., M. King, A. Tishler and L.C.H. Chow (2006) "Costs of Electricity Deregulation," Energy, 31:6-7, 747-768. (Lead article after Guest Editors' Introduction, one of the 25 most downloaded articles)
- 13. Tishler, A. and C.K. Woo (2006) "Likely Failure of Electricity Deregulation: Explanation with Application to Israel," Energy, 31:6-7, 845-856.
- 14. Tishler, A., J. Newman, I. Spekterman and C.K. Woo (2006) "Cost-Benefit Analysis of Reforming Israel's Electricity Industry," Energy Policy, 34:16, 2442-2454. (Lead article after Guest Editor's Introduction).
- 15. Woo, C.K., D. Lloyd, R. Karimov and A. Tishler (2003) "Stranded Cost Recovery in Electricity Market Reforms in the US," Energy, 28:1, 1-14. (Lead article)
- 16. Woo, C.K., D. Lloyd and A. Tishler (2003) "Electricity Market Reform Failures: UK, Norway, Alberta and California," Energy Policy, 31:11, 1103-1115. (One of the 25 most downloaded articles)
- 17. Tishler, A., C.K. Woo and D. Lloyd (2002) "Reforming Israel's Electric Sector," Energy Policy, 30:4, 347-353.
- 18. Woo, C.K. (2001) "What Went Wrong in California's Electricity Market?" Energy, 26:8, 747-758.
- 19. Woo, C. K., I. Horowitz and J. Martin (1998) "Reliability Differentiation of Electricity Transmission," Journal of Regulatory Economics, 13, 277-292.
- 20. Woo, C.K., D. Lloyd-Zannetti and I. Horowitz (1997) "Electricity Market Integration in the Pacific Northwest," The Energy Journal, 18:3, 75-101.

Electricity Procurement

1. Olson, A., C.K. Woo, N. Schlag and A. Ong (2016) "What Happens in California Does Not Always Stay in California: The Effect of California's Cap-and-Trade Program on Wholesale Electricity Prices in the Western Interconnection," The Electricity Journal, 29(7), 18-22.

- 2. Zarnikau, J., C.K. Woo and S.S. Zhu (2016) "Zonal Merit-order Effects of Wind Generation Development on Day-ahead and Real-time Electricity Market Prices in Texas," Journal of Energy Markets, forthcoming.
- 3. Woo, C.K., J. Moore, B. Schneiderman, T. Ho, A. Olson, L. Alagappan, K. Chawla, N. Toyama, and J. Zarnikau (2016) "Merit-order Effects of Renewable Energy and Price Divergence in California's Day-ahead and Real-time Electricity Markets," Energy Policy, 92, 299-312.
- 4. Woo, C. K., T. Ho, J. Zarnikau, A. Olson, R. Jones, M. Chait, I. Horowitz and J. Wang (2014) "Electricity-Market Price and Nuclear Power Plant Shutdown: Evidence from California," Energy Policy, 73, 234-244.
- 5. Woo, C.K., J. Zarnikau, J. Kadish, I. Horowitz, J. Wang and A. Olson (2013) "The Impact of Wind Generation on Wholesale Electricity Prices in the Hydro-Rich Pacific Northwest," IEEE Transactions on Power Systems, 28(4), 4245-4253.
- 6. Woo, C.K., I. Horowitz, G. Kwok, S.K. Wan and W.W. Weng (2013) "A Win-Win Mechanism for Electricity Procurement by a Local Distribution Company, Electricity Journal, 26:1, 27-35.
- 7. DeBenedictis, A., D. Miller, J. Moore, A. Olson and C.K. Woo (2011) "How Big is the Risk Premium in an Electricity Forward Price? Evidence from the Pacific Northwest," Electricity Journal, 24:3, 72-76.
- 8. Woo, C.K., B. Horii, M. Chait and I. Horowitz (2008) "Should a Lower Discount Rate be Used for Evaluating a Tolling Agreement than Used for a Renewable Energy Contract?" Electricity Journal, 21:9, 35-40.
- 9. Orans, R., S. Price, J. Williams, C.K. Woo and J. Moore (2007) "A Northern California British Columbia Partnership for Renewable Energy" Energy Policy, 35:8, 3979-3983 (Lead article).
- 10. Woo, C.K., D. Lloyd and W. Clayton (2006) "Did a Local Distribution Company Procure Prudently during the California Electricity Crisis?" Energy Policy, 34:16, 2552-2565.
- 11. Orans, R., C.K. Woo and W. Clayton (2004) "Benchmarking the Price Reasonableness of a Long-Term Electricity Contract," Energy Law Journal, 25:2, 357-383.
- 12. Woo, C.K., A. Olson and R. Orans (2004) "Benchmarking the Price Reasonableness of an Electricity Tolling Agreement," Electricity Journal, 17:5, 65-75. (One of the 25 most downloaded articles)
- 13. Lloyd, D., C.K. Woo, M. Borden, R. Warrington and C. Baskette (2004) "Competitive Procurement and Internet-based Auction: Electricity Capacity Option," Electricity Journal, 17:4, 74-78. (One of the 25 most downloaded articles)
- 14. Woo, C.K., D. Lloyd, M. Borden, R. Warrington and C. Baskette (2004) "A Robust Internet-Based Auction to Procure Electricity Forwards," Energy, 29:1, 1-11. (Lead article)
- 15. Woo, C.K., M. Borden, R. Warrington and W. Cheng (2003) "Avoiding Overpriced Risk Management: Exploring the Cyber Auction Alternative," Public Utilities Fortnightly, 141:2, 30-37.

Electricity Risk Management

- 1. Woo, C.K., S.T. Ho, H.Y. Leung, J. Zarnikau, and E. Cutter (2015) "Virtual Bidding, Wind Generation and California's Day-Ahead Electricity Forward Premium," Electricity Journal, 28(1), 29-48.
- 2. Zarnikau, J., C.K. Woo, C. Gillett, T. Ho, S. Zhu, and E. Leung (2015) "Day-ahead Forward Premium in the Texas Electricity Market," Journal of Energy Markets, 8(2), 1-20.
- 3. Woo, C.K., I. Horowitz, A. Olson, B. Horii and C. Baskette (2006) "Efficient Frontiers for Electricity Procurement by an LDC with Multiple Purchase Options," OMEGA, 34:1, 70-80.
- 4. Woo, C.K., A. Olson and I. Horowitz (2006) "Market Efficiency, Cross Hedging and Price Forecasts: California's Natural-Gas Markets," Energy, 31, 1290-1304.
- 5. Woo, C.K., I. Horowitz, B. Horii and R. Karimov (2004) "The Efficient Frontier for Spot and Forward Purchases: An Application to Electricity," Journal of the Operational Research Society, 55, 1130-1136.
- 6. Woo, C.K., R. Karimov and I. Horowitz (2004) "Managing Electricity Procurement Cost and Risk by a Local Distribution Company," Energy Policy, 32:5, 635-645.
- 7. Woo, C.K., I. Horowitz and K. Hoang (2001) "Cross Hedging and Forward-Contract Pricing of Electricity," Energy Economics, 23, 1-15. (Lead article and one of the 10 most cited recent papers published in Energy Economics, see Tol, R.J.S. and J.P. Weyant (2006) "Energy Economics' most influential papers," Energy Economics, 28:4, 405-409)

Demand Response and Capacity Rationing

- 1. Woo, C.K., J. Zarnikau, A. Shiu and R. Li (2017) "Winter Residential Optional Dynamic Pricing: British Columbia, Canada," The Energy Journal, 38(5), 99-111.
- 2. Woo, C.K., J. Zarnikau, R. Li, and A. Shiu (2016) "kWh Effects of Residential Optional Dynamic Pricing: Winter Evidence from British Columbia, Canada," Electricity Journal, 29(9), 44-47.
- 3. Woo, C.K., P. Sreedharan, J. Hargreaves, F. Kahrl, J. Wang, and I. Horowitz (2014) "A Review of Electricity Product Differentiation," Applied Energy, 114, 262-272.
- 4. Woo, C.K., R. Li, A. Shiu and I. Horowitz (2013) "Residential Winter kWh Responsiveness under Optional Time-varying Pricing in British Columbia" Applied Energy, 108, 288-297.
- 5. Woo, C.K., I. Horowitz and I. Sulyma (2013) "Relative kW Response to Residential Time-Varying Pricing in British Columbia," IEEE Transactions on Smart Grid, 4(4), 1852-1860.
- 6. Woo, C.K. and L. Greening (2010) "Guest Editors' Introduction", Energy 35, 1515-1517.
- 7. Moore, J., C.K. Woo, B. Horii, S. Price and A. Olson (2010) "Estimating the Option Value of a Non-firm Electricity Tariff," Energy, 35, 1609-1614.

- 8. Woo, C.K., E. Kollman, R. Orans, S. Price and B. Horii (2008) "Now that California Has AMI, What Can the State Do with It?" Energy Policy, 36, 1366-74.
- 9. Horowitz, I. and C.K. Woo (2006) "Designing Pareto-Superior Demand-Response Rate Options," Energy, 31:6-7, 1040-1051.
- 10. Hartway, R., S. Price and C.K. Woo (1999) "Smart Meters, Customer Choice and Profitable Time of Use Rate Option," Energy, 24, 895-903.
- 11. Woo, C.K., P. Chow and I. Horowitz (1996) "Optional Real-Time Pricing of Electricity for Industrial Firms," Pacific Economic Review, 1:1, 79-92.
- 12. Woo, C.K., R. Orans, B. Horii and P. Chow (1995) "Pareto-Superior Time-of-Use Rate Option for Industrial Firms," Economics Letters, 49, 267-272.
- 13. Woo, C.K. (1993) "Efficient Electricity Pricing with Self-Rationing: Reply," Journal of Regulatory Economics, 5:1, 101-102.
- 14. Woo, C.K. (1992) "Optimal Electricity Pricing and Capacity Rationing," Hong Kong Economic Papers, 22, 1-6.
- 15. Woo, C.K. (1991) "Capacity Rationing and Fixed Cost Collection," The Energy Journal, 12:2, 153-164.
- 16. Woo, C.K. (1990) "Efficient Electricity Pricing with Self-Rationing," Journal of Regulatory Economics, 2:1, 69-81. Reprinted in Rees R. (2006) The Economics of Public Utilities, The International Library of Critical Writings in Economics Series 196, Edward Elgar.
- 17. Woo, C.K. and N. Toyama (1986) "Service Reliability and the Optimal Interruptible Rate Option in Residential Electricity Pricing," The Energy Journal, 7:3, 123-136.

Electricity Pricing and Rate Design

- 1. Li, M., R. Orans, J. Kahn-Lang and C.K. Woo (2014) "Are Residential Customers Price-responsive to an Inclining Block Rate? Evidence from British Columbia, Canada," The Electricity Journal, 27(1), 85-92.
- 2. Orans, R., C.K. Woo, B. Horii, M. Chait and A. DeBenedictis (2010) "Electricity Pricing for Conservation and Load Shifting," Electricity Journal, 23:3, 7-14.
- 3. Orans, R., M. King, C.K. Woo and W. Morrow (2009) "Inclining for the Climate: GHG Reduction via Residential Electricity Ratemaking," Public Utilities Fortnightly, 147:5, 40-45.
- 4. Woo, C. K., B. Horii and I. Horowitz (2002) "The Hopkinson Tariff Alternative to TOU Rates in the Israel Electric Corporation," Managerial and Decision Economics, 23, 9-19.
- 5. Seeto, D. Q., C.K. Woo and I. Horowitz (2001) "Finessing the Unintended Outcomes of Price-Cap Adjustments: An Electric Utility Multi-Product Perspective," Energy Policy, 29:13, 1111-1118.

- 6. Seeto, D.Q., C. K. Woo and I. Horowitz (1997) "Time-of-Use Rates vs. Hopkinson Tariffs Redux: An Analysis of the Choice of Rate Structures in a Regulated Electricity Distribution Company," Energy Economics, 19, 169-185.
- 7. Horowitz, I., D.Q. Seeto and C.K. Woo (1996) "Ramsey Pricing of Electricity under Unknown Bypass Costs," The Energy Journal, 17:2, 59-77.
- 8. Seeto, D.Q., S.D. He and C.K. Woo (1994) "Pricing Electric Harmonics," Energy, 20:7, 617-621.
- 9. Woo, C.K., B. Hobbs, R. Orans, R. Pupp and B. Horii (1994) "Emission Costs, Customer Bypass and Efficient Pricing of Electricity," The Energy Journal, 15:3, 43-54.
- 10. Orans, R., C.K. Woo, R. Pupp and I. Horowitz (1994) "Demand Side Management and Electric Power Exchange," Resource and Energy Economics, 16, 243-254.
- 11. Woo, C.K. (1988) "Optimal Electricity Rates and Consumption Externality," Resources and Energy, 10, 277-292.
- 12. Woo, C.K. and D.Q. Seeto (1988) "Optimal Off-Peak Incremental Sales Rate in Electricity Pricing," The Energy Journal, 9:1, 93-102.
- 13. Woo, C.K. (1988) "Inefficiency of Avoided Cost Pricing of Cogenerated Power," The Energy Journal 9:1, 103-113.
- 14. Woo, C.K. (1985), "An Application of the Expenditure Function in Electricity Pricing: Optimal Residential Time-of-Use Rate Option," The Energy Journal, 6:2, 89-99.

Integrated Resource Planning

- 1. Sreedharan, P., J. Farbes, E. Cutter, C.K. Woo, and J. Wang (2016) "Microgrid and renewable generation integration: University of California, San Diego," Applied Energy, 169, 709-720.
- 2. Woo, C.K., A. Shiu, Y.S. Cheng, R. Li, T. Ho, I. Horowitz and J. Wang, (2014) "Residential Willingness-to-Pay for Reducing Coal-Fired Generation's Emissions in Hong Kong," The Electricity Journal, 27(3), 50-66.
- 3. Cutter, E., B. Haley, J. Williams and C.K. Woo (2014) "Cost-effective Water-Energy Nexus: A California Case Study," The Electricity Journal, 27(6), 61-68.
- 4. Lam, J.C.K., C.K. Woo, F. Kahrl and W.K. Yu (2013) "What Moves Wind Energy Development in China? Show Me the Money!" Applied Energy, 105, 423-429.
- 5. Cutter, E., C.K. Woo, F. Kahrl and A. Taylor (2012) "Maximizing the Value of Responsive Load," Electricity Journal, 25(7), 6-16.
- 6. Woo, C.K., H. Liu, F. Kahrl, N. Schlag, J. Moore and A. Olson (2012) "Assessing the economic value of transmission in Alberta's restructured electricity market," Electricity Journal, 25(3): 68-80.

- 7. Sreedharan, P., D. Miller, S. Price and C.K. Woo (2012) "Avoided cost estimation and cost-effectiveness of permanent load shifting in California," Applied Energy, 96, 115-121.
- 8. Alagappan, L., R. Orans and C.K. Woo (2011) "What Drives Renewable Energy Development?" Energy Policy, 39: 5099-5104.
- 9. Olson A., R. Orans, D. Allen, J. Moore and C.K. Woo (2009) "Renewable Portfolio Standards, Greenhouse Gas Reduction, and Long-line Transmission Investments in the WECC," Electricity Journal, 22:9, 38-46.
- 10. Mahone, A., C.K. Woo, J. Williams and I. Horowitz (2009) "Renewable Portfolio Standards and Cost-Effective Energy Efficiency Investment," Energy Policy, 37:3, 774-777.
- 11. Heffner, G., C.K. Woo, B. Horii and D. Lloyd-Zannetti (1998) "Variations in Area- and Time-Specific Marginal Capacity Costs of Electricity Distribution," IEEE Transactions on Power Systems, PE-493-PWRS-012-1997, 13:2, 560-567.
- 12. Forte, V.J., R. Pupp, R. Putnam and C.K. Woo (1995) "Using Customer Outage Costs in Electricity Reliability Planning," Energy, 20:2, 81-87.
- 13. Pupp, R., C.K.Woo, R. Orans, B. Horii and G. Heffner (1995) "Load Research and Integrated Local T&D Planning," Energy, 20:2, 89-94.
- 14. Woo, C.K., D. Lloyd-Zannetti, R. Orans, B. Horii and G. Heffner (1995) "Marginal Capacity Costs of Electricity Distribution and Demand for Distributed Generation," The Energy Journal, 16:2, 111-130.
- 15. Woo, C.K., R. Orans, B. Horii, R. Pupp and G. Heffner (1994) "Area- and Time-Specific Marginal Capacity Costs of Electricity Distribution," Energy, 19:12, 1213-1218.
- 16. Orans, R., C.K. Woo and B. Horii (1994) "Targeting Demand Side Management for Electricity Transmission and Distribution Benefits," Managerial and Decision Economics, 15, 169-175.
- 17. Orans, R., C.K. Woo and R.L. Pupp (1994) "Demand Side Management and Electric Power Exchange," Energy, 19:1, 63-66.
- Keane, D.M. and C.K. Woo (1992) "Using Customer Outage Costs to Plan Generation Reliability," Energy, 17:9, 823-827.

Value of Service Reliability

- 1. Woo, C. K., T. Ho, A. Shiu, Y.S. Cheng, I. Horowitz and J. Wang (2014) "Residential Outage Cost Estimation: Hong Kong," Energy Policy, 72, 204-210.
- 2. Woo, C.K. and R.L. Pupp (1992) "Costs of Service Disruptions to Electricity Consumers," Energy, 17:2, 109-126.
- 3. Woo, C.K., R.L. Pupp, R. Mango and T. Flaim (1991) "How Much Do Electricity Consumers Want to Pay for Reliability?" Energy Systems and Policy, 15, 145-159.
- 4. Hartman, R.S., M.J. Doane and C.K. Woo (1990) "Status Quo Bias in the Measurement of Value of Service," Resources and Energy, 12, 197-214.
- 5. Munasinghe, M., C.K. Woo and H.P. Chao (1988) "Guest Editors' Introduction," Special Electricity Reliability Issue, The Energy Journal, 9. i-iv.
- 6. Goett, A.A. D. McFadden and C.K. Woo (1988) "Estimating Residential Value of Service Reliability with Market Research Data," Special Electricity Reliability Issue, The Energy Journal, 9, 105-120.
- 7. Woo, C.K. and K. Train (1988) "The Cost of Electric Power Interruption to Commercial Firms," Special Electricity Reliability Issue, The Energy Journal, 9, 161-172.
- 8. Doane, M.J., R.S. Hartman and C.K. Woo, (1988) "Households' Perceived Value of Electric Power Service Reliability: An Analysis of Contingent Valuation Data," Special Electricity Reliability Issue, The Energy Journal, 9, 135-149.
- 9. Doane, M.J., R.S. Hartman and C.K. Woo, (1988) "Household Preferences of Interruptible Rate Options and the Revealed Value of Service Reliability," Special Electricity Reliability Issue, The Energy Journal, 9, 121-134.
- 10. Keane, D.M., L.S. MacDonald and C.K. Woo (1988) "Estimating Residential Partial Outage Costs with Market Research Data," Special Electricity Reliability Issue, The Energy Journal, 9, 151-159.

Applied Microeconomics

- 1. Liu, Y., C.K. Woo and J. Zarnikau (2017) "Wind Generation's Effect on the Ex Post Variable Profit of Compressed Air Energy Storage: Evidence from Texas," Journal of Energy Storage, 9, 25-39.
- 2. Shiu, A., R. Li and C.K. Woo (2016) "Economic growth and infrastructure investments in energy and transportation: A causality interpretation of China's Western Development Strategy," The Energy Journal, 37(SI1), 211-222.
- 3. Liu, Y., C.K. Woo and J. Zarnikau (2016) "Ex post payoffs of a tolling agreement for natural-gas-fired generation in Texas," Journal of Energy Markets, 9(1), 21-45.

- 4. Woo, C.K., I. Horowitz, J. Zarnikau, J. Moore, B. Schneiderman, T. Ho, and E. Leung (2016) "What Moves the Ex Post Variable Profit of Natural-Gas-Fired Generation in California?" The Energy Journal, 37(3), 29-57.
- 5. Woo, C.K., Y. S. Cheng, A. Law, J. Zarnikau, S.T. Ho and H.Y. Leung (2015) "Consumer Support for a Public Utilities Commission in Hong Kong," Energy Policy, 76, 87-97.
- 6. Weng, W., C.K. Woo, Y.S. Cheng, S.T. Ho and I. Horowitz (2015) "Public Trust and Corruption Perception: Disaster Relief," Applied Economics, DOI: 10.1080/00036846.2015.1039703...
- 7. Woo, C.K., Y.S. Cheng, R. Li, A. Shiu, S.T. Ho, and I. Horowitz (2015) "Can Hong Kong Pricemanage its Cross-harbor Tunnel Congestion?" Transportation Research Part A: Policy and Practice, 82, 94-109.
- 8. Woo, C.K., J. Zarnikau, I. Horowitz and A. Shiu (2014) "Transparency of Retail Energy Pricing: Evidence from the U.S. Natural Gas Industry," Managerial and Decision Economics, 35(4), 300-308.
- 9. Wan, S.K., S.H. Wang and C.K. Woo (2013) "Aggregate vs. Disaggregate forecast: Case of Hong Kong," Annals of Tourism Research, 42, 434-438.
- 10. DeBenedictis, A., B. Haley, C.K. Woo and E. Cutter (2013) "Operational Energy-Efficiency Improvement of Municipal Water Pumping in California," Energy, 53, 237-243.
- 11. Cheng, Y.S., W.K. Wong and C.K. Woo (2013) "How Much Have Electricity Shortages Hampered China's GDP Growth?" Energy Policy, 55, 369-373.
- 12. Lai, A. and C.K. Woo (2012) "Do You Want to Be Lucky?" Significance http://www.significancemagazine.org/details/webexclusive/1796049/Do-you-want-to-be-Lucky.html
- 13. Woo, C.K., W.K. Wong, I. Horowitz and H.L. Chan (2012) "Managing a Scarce Resource in a Growing Asian Economy: Water Usage in Hong Kong," Journal of Asian Economics, 23, 374-382.
- 14. Woo, C.K., J. Zarnikau and E. Kollman (2012) "Exact Welfare Measurement for Double-log Demand with Partial Adjustment," Empirical Economics, 42, 171–180.
- 15. Woo, C.K., I. Horowitz, B. Horii, R. Orans, and J. Zarnikau (2012) "Blowing in the wind: Vanishing payoffs of a tolling agreement for natural-gas-fired generation of electricity in Texas," The Energy Journal, 33:1, 207-229.
- 16. Woo, C.K., I. Horowitz, J. Moore and A. Pacheco (2011) "The impact of wind generation on the electricity spot-market price level and variance: the Texas experience" Energy Policy, 39:7, 3939-3944.
- 17. Woo, C.K., J. Zarnikau, J. Moore and I. Horowitz (2011) "Wind Generation and Zonal-Market Price Divergence: Evidence from Texas" Energy Policy, 39:7, 3928-3938.

- 18. DeBenedictis, A., T. E. Hoff, S. Price and C.K. Woo (2010) "Statistically Adjusted Engineering (SAE) Modeling of Metered Roof-Top Photovoltaic (PV) Output: California Evidence," Energy, 35, 4178-4183.
- 19. Allen, D., I. Horowitz and C.K. Woo (2010) "How May a Customer Exploit the Bonneville Power Administration's New Pricing Scheme?" International Journal of Applied Decision Sciences, 4:1, 80-93.
- 20. Woo, C.K., I. Horowitz, S. Luk and A. Lai (2008) "Willingness to Pay and Nuanced Cultural Cues: Evidence from Hong Kong's License-Plate Auction Market" Journal of Economic Psychology, 29, 35-53.
- 21. Woo, C.K. and R.H.F. Kwok (1994) "Vanity, Superstition and Auction Price," Economics Letters, 44, 389-395.
- 22. Woo, C.K. (1994) "Managing Water Supply Shortage: Interruption vs. Pricing," Journal of Public Economics, 54, 145-160.
- 23. Woo, C.K. and K.W.K. Lo (1993) "Factor Supply Interruption, Welfare Loss and Shortage Management," Resource and Energy Economics, 15, 339-352.
- 24. Woo, C.K. (1992) "Drought Management, Service Interruption and Water Pricing: Evidence from Hong Kong," Water Resources Research, 28:10, 2591-2595.
- 25. Hartman, R.S., M.J. Doane and C.K. Woo (1991) "Consumer Rationality and the Status Quo," Quarterly Journal of Economics, February, 141-162.
- 26. Woo, C.K., P. Hanser and N. Toyama (1986) "Estimating Hourly Electric Load with Generalized Least Squares Procedures," The Energy Journal, 7:2, 153-170.
- 27. Woo, C.K. (1985) "Demand for Electricity of Small Nonresidential Customers under Time-of-Use Pricing," The Energy Journal, 6:4, 115-127.
- 28. Woo, C.K. (1984) "A Note on Measuring Household Welfare Effects of Time-of-Use Pricing," The Energy Journal, 5:3, 171-181.

Applied Finance

- 1. Woo, C.K., I. Horowitz, A. Olson, A. DeBenedictis, D. Miller and J. Moore (2011) "Cross-Hedging and Forward-Contract Pricing of Electricity in the Pacific Northwest," Managerial and Decision Economics, 32, 265-279.
- 2. Woo, C.K., I. Horowitz, N. Toyama, A. Olson, A. Lai and R. Wan (2007) "Fundamental Drivers of Electricity Prices in the Pacific Northwest," Advances in Quantitative Analysis of Finance and Accounting, 5, 299-323.
- 3. Woo, C.K., I. Horowitz and K. Hoang (2001) "Cross Hedging and Value at Risk: Wholesale Electricity Forward Contracts," Advances in Investment Analysis and Portfolio Management, 8, 283-301.

- 4. Wong, K.A., C.K. Woo and R.Y.K. Ho (1998) "Macroforecasting Accuracy and Gains from Stock Market Timing," Research in Finance, 16, 127-139.
- 5. Woo, C.K. and Y.L. Cheung (1996) "Specification Tests of A Market Model of Stock Returns," Advances in Quantitative Finance and Accounting, 4, 187-194.
- 6. Woo, C.K., A. Lai and Y.L. Cheung (1995) "Specification Tests of A Market Model of Asia-Pacific Stock Returns: Thailand and Hong Kong," Journal of Business Finance and Accounting, 22:3, 363-375.
- 7. Woo, C.K., Y.L. Cheung and R.Y.K. Ho (1994) "Endogeneity Bias in Beta Estimation: Thailand and Hong Kong," Pacific-Basin Finance Journal, 2, 453-461.
- 8. Ho, R.Y.K., Z. Fang and C.K. Woo (1992) "Intraday Arbitrage Opportunities and Price Behavior of Hang Seng Index Futures," The Review of Futures Markets, 11:3, 413-430.
- 9. Fang, Z. and C.K. Woo (1991) "Two Factor Model for Bond Selection," Economics Letters, 37, 417-421.

Book Reviews

- 1. Woo, C.K. (2007) "Book Review: Agile Energy Systems: Global Lessons from the California Energy Crisis by W.W. Clark II and T.K. Bradshaw," Energy, 32, 871.
- 2. Woo, C.K. (2005) "Book Review: Electricity Reform in China, India and Russia by Xu Yi-chong," Energy Studies Review, 13:2, 148-149.
- 3. Woo, C.K. (2004) "Book Review: Reforming the Power Sector in Africa edited by M.R. Bhagavan," Energy, 29, 1231-1232.

Invited Lectures

- 1. "Winter Residential Optional Dynamic Pricing: British Columbia, Canada," Seminar organized by IEEE (HK), 12 December 2016, Hong Kong Polytechnic University.
- 2. "Can Hong Kong price-manage its cross-harbor-tunnel congestion?" The Fourth International Conference on Social Policy and Governance Innovation: Innovation in Social Service Delivery, 24 November 2016, Education University of Hong Kong.
- 3. "Hong Kong's electricity market: What do consumers want?" Biennial Workshop of the Hong Kong Economic Association on Economic Analysis in Competition Law Enforcement: the Implications for the Region, 24 October 2015, Hong Kong.
- 4. "Public Consultation on the Future Development of the Electricity Market," IEEE JC Forum organized by IEEE (HK) Joint Chapter of Power & Energy Society, Industrial Application Society, Power Electronics Society and Industrial Electronics Society (PES/IAS/PELS/IES JC), 13 June 2015, Hong Kong Polytechnic University.

- 5. "Overview of Market Reform," Public Education Workshop on Hong Kong's Electricity Future hosted by the School of Business, Hong Kong Baptist University, 29 April 2015.
- "Consumer support for public utilities commission in Hong Kong," Seminar organized by IEEE (HK)
 Joint Chapter of Power & Energy Society, Industrial Application Society, Power Electronics Society
 and Industrial Electronics Society (PES/IAS/PELS/IES JC), 19 January 2015, Hong Kong Polytechnic
 University.
- 7. "Key questions for developing an efficient market," Challenges and Opportunities in Modern Electricity Markets: Learning from the Experts, Public Workshop sponsored by Israel's Public Utility Authority and Ministry of National Infrastructures, Energy and Water Resources, Jerusalem, 6 7 July, 2014.
- 8. "A review of electricity product differentiation," The 13th Annual Power Symposium 2014 On Dynamic & Flexible Response of Today's Power Network Operation to the Changing Environment, Power & Energy Section, The Institution of Engineering and Technology Hong Kong, 13 June 2014, Kowloon Shangri-La.
- 9. "Residential willingness-to-pay for reducing coal-fired generation's emissions in Hong Kong?" IEEE Seminar and Panel Discussion organized by IEEE (HK) Joint Chapter of Power & Energy Society, Industrial Application Society, Power Electronics Society and Industrial Electronics Society (PES/IAS/PELS/IES JC), 22 November 2013, Hong Kong Polytechnic University http://www.ee.polyu.edu.hk/ieee/activities.htm
- 10. "Should Hong Kong reduce its electricity reliability?" IEEE Seminar and Panel Discussion organized by IEEE (HK) Joint Chapter of Power & Energy Society, Industrial Application Society, Power Electronics Society and Industrial Electronics Society (PES/IAS/PELS/IES JC), 30 August 2013, Hong Kong Polytechnic University http://www.ee.polyu.edu.hk/ieee/activities.htm
- 11. "Shaping Hong Kong's electricity future: Choices for change," Challenges and Opportunities in Creating a Sustainable Environment, 14 June 2013, Hong Kong Polytechnic University http://www.scmp.com/news/hong-kong/article/1261175/mainland-must-be-factor-review-hks-electricity-scheme-says-christine
- 12. "Shaping Hong Kong's electricity future: Choices for change," IEEE Open Forum: Hong Kong Electricity Market Now, Till 2018 and Beyond, 20 April 2013, Hong Kong Polytechnic University http://www.ee.polyu.edu.hk/ieee/Documents/ForumMarket.pdf>
- 13. "Wind Generation Development and Incentive for Dispatchable Thermal Generation Investment," University of Texas (Austin) Energy Symposium, October 13, 2011.
- 14. "Rate Design: Dynamic Pricing and Alternative Approaches to Demand Side Management," Utility Rate Case Conference, October 5, 2010, Chicago.
- 15. "Renewable Portfolio Standards, Electricity Pricing and Energy Efficiency," Conference of the Electric Power Supply Industry (CEPSI) October 27-31, 2008 Macau.

- 16. "A Critical Assessment of the Hong Kong Government's Proposed Post-2008 Regulatory Regime for Local Electricity Utilities," Elizabeth Chan Cheng E-Lay Geography Academic Seminar, March 16, 2006, Hong Kong Baptist University.
- 17. "Israeli Reform," Electricity Industry Reform in Small Markets Lessons for Hong Kong: Lunch and Seminar, October 12, 2004, sponsored by Hong Kong Electric Company, UBS, and Mallesons Stephen Jaques.
- 18. "Recent Contributions to Customer Outage Cost Estimation," Workshop on Energy Load Management, July 1988, Israel Ministry of Energy and Infrastructure.

Testimony

- 1. Woo, C.K. (2012) Surrebuttal Testimony: Cross Hedging for Managing Electricity Procurement Cost Risk, Case No.: EO-2011-0390, for KCP&L Greater Missouri Operations Company before the Missouri Public Service Commission.
- 2. Woo, C.K. (2012) Direct Testimony: Cross Hedging for Managing Electricity Procurement Cost Risk, Case No.: EO-2011-0390, for KCP&L Greater Missouri Operations Company before the Missouri Public Service Commission.
- 3. Woo, C.K. (2009) Expert Report on Hydro One Distribution's Density-Based Rates, for the School Energy Coalition before the Ontario Energy Board.
- 4. Orans, R. and C.K. Woo (2008) Direct Testimony: Transmission Rate Design for Hydro-Québec TransÉnergie (HQT) before the Régie.
- 5. Woo, C.K. (2006) Expert Witness Declaration of Dr.C.K. Woo on Behalf of Oakley, Inc.: Oakley, Inc. vs. New West Energy Corporation.
- Woo, C.K. (2004) Electricity Price Forecast: 2001-2030, and Response to Rebuttal Testimony of William A. Monsen; In the Matter of the Application for Reduction of Assessment of Geysers Power Company, LLC, Sonoma County Assessment Appeals Board, Application Nos.: 01/01-137 through 157.
- 7. Woo, C.K. (2004) Declaration of Dr. C.K. Woo in support of Micrel Inc.'s final offer: Micrel Inc. v. Chevron Energy Solutions, LP.
- 8. Woo, C.K. (2002) Rebuttal Testimony filed on the behalf of Southern California Water Company before the California Public Utilities Commission.
- 9. Woo, C.K. and P.D. Ferguson (1999) Comments on the Ontario Energy Board Staff's Draft Electric Distribution Rate Handbook submitted to Ontario Energy Board on the behalf of The Upper Canada Energy Alliance.
- 10. Woo, C.K. (1996) Direct Testimony, Industrial Service Options Application, prepared for B.C. Hydro.

- 11. Woo, C.K. (1996) Rebuttal Testimony Presenting an Analysis of the Use of Class-based Value of Service for Marginal Generation Capacity Costs, filed with California Public Utilities Commission for Pacific Gas Electric Company's 1996 General Rate Case.
- 12. Woo, C.K. (1979) Economics of Solar Financing, Order Instituting Investigation 42 Testimony submitted to the California Public Utilities Commission for the California Energy Commission.

Research Reports

- 1. Woo, C.K., F. Kahrl, N. Schlag, J. Moore and A. Olson (2012) Economic Assessment of North/South Transmission Expansion in Alberta, report submitted to AltaLink.
- 2. Horii B., C.K. Woo, E. Kollman and M. Chait (2009) Smart Meter Implementation Business Case, Rate-related Capacity Conservation Estimates Technical Appendices submitted to B.C. Hydro.
- 3. Woo, C.K. and E. Kollman (2009) Relative kW Response to Residential Time-of-Use and Critical Peak Pricing in British Columbia, report submitted to B.C. Hydro.
- 4. Woo, C.K. (2009) Unreported Demand-Side-Management of BC Hydro's Transmission Service Rate's Structural Change, report submitted to B.C. Hydro.
- 5. Woo C.K. and K. Herter (2006) Residential Demand Response Evaluation Scoping Study, LBNL Report-61090, report submitted to Demand Response Research Center, Lawrence Berkeley National Laboratory.
- 6. Woo, C.K. (2005) Should Hong Kong Reform its Electricity Sector? report submitted to The Real Estate Developers Association of Hong Kong.
- 7. Woo, C.K. and M. King (2004) Costs of Electricity Deregulation and Implications for Israel, report submitted to Israel Electric Corporation.
- 8. Woo. C.K. and D. Lloyd (2001) Stranded Cost Recovery in Electricity Market Reforms, report submitted to Israel Electric Corporation.
- 9. Orans, R., Woo C.K., and Olsen, Arne, Stepped Rates Report, prepared for BC Hydro and filed with the BCUC, May, 2003.
- 10. Woo. C.K. and D. Lloyd (2001) Assessment of the Peak Benefit Multiplier Effect: (a) Economic Theory and Statistical Specification; and (b) Theory, Estimation and Results, reports submitted to Pacific Gas and Electric Company.
- 11. Horii, B., C.K. Woo and D. Engel (2000) PY2001 Public Purpose Program Strategy and Filing Assistance: (a) A New Methodology for Cost-Effectiveness Evaluation; (b) Peak Benefit Evaluation; (c) Screening Methodology for Customer Energy Management Programs; and (d) Should California Ratepayers Fund Programs that Promote Consumer Purchases of Cost-Effective Energy Efficient Goods and Services? reports submitted to Pacific Gas and Electric Company.

- 12. Tishler, A., C.K. Woo and D. Lloyd (2000) Reforming Israel's Electric Sector: Choices for Change, position paper submitted to Israel Electric Corporation.
- 13. Woo, C.K. and K. Hoang (1999) Cross Hedging and Risk Premium, report submitted to Ontario Power Generation Inc.
- 14. Woo, C.K. and B. Horii (1999) Should Israel Electric Corporation (IEC) Replace Its Industrial Time of Use Energy Rates with A Hopkinson Tariff? report prepared for Israel Electric Corporation.
- 15. Lloyd-Zannetti D. and C.K. Woo (1997) Wheeling Charges for Transmission Service, report prepared for Israel Electric Corporation.
- 16. Lloyd-Zannetti D. and C.K. Woo (1997) Capacity Shortage and Profitable Rate Options, report prepared for Israel Electric Corporation.
- 17. Lloyd-Zannetti, D., B. Horii, J. Martin, S. Price and C.K. Woo (1996) Profitability Primer: A Guide to Profitability Analysis in the Electric Power Industry, Report No. TR-106569, Electric Power Research Institute.
- 18. Woo, C.K. (1996) Electricity Market Integration in the Western Interconnection, prepared for British Columbia Power Exchange Corporation (Powerex).
- 19. Woo, C.K. and R. Orans (1996) Transmission: Spot Price, Reliability Differentiation and Investment, report submitted to Ontario Hydro.
- 20. Orans, R., C.K. Woo and B. Horii (1995) Impact of Market Structure and Pricing Options on Customers' Bills, report submitted to B.C. Hydro.
- 21. Woo, C.K., L. Woo and R. Orans (1995) Rationing and Area-Specific Generation Costs, report submitted to Pacific Gas and Electric Company.
- 22. Woo, C.K., D. Lloyd-Zannetti and L. Woo (1994) Using Residual Emissions Adders in Electricity Ratemaking, report submitted to Pacific Gas and Electric Company.
- 23. Orans, R., C.K. Woo and C. Greenwell (1994) Designing Profitable Rate Options Using Area- and Time-Specific Costs, Report No. TR-104375, Electric Power Research Institute.
- 24. Orans, R. and C.K. Woo (1992) Marginal Cost Disaggregation Study, report submitted to Wisconsin Electric Power Corporation.
- 25. Orans, R., C.K. Woo, J.N. Swisher, B. Wiersma and B. Horii (1992) Targeting DSM for Transmission and Distribution Benefits: A Case Study of PG&E's Delta District, Report No. TR-100487, Electric Power Research Institute.
- 26. Pupp, R. and C.K. Woo (1991) Integrating Customer Outage Costs in Electricity Reliability Planning, report submitted to Niagara Mohawk Power Corporation.

- 27. Woo, C.K., R.L. Pupp and D. Glyer (1991) Voluntary Interruptible Pricing Program (VIPP): An Integrated Approach to Electricity Reliability Pricing, report submitted to Niagara Mohawk Power Corporation. Also in Caves, D.W. and D. Glyer (1992), Designing an Integrated Menu of Electric Service Options, Electric Power Research Institute Report TR-100523, Appendix B.
- 28. Doane, M.J., G. McCelland, W. Schulze and C.K. Woo (1990) Industrial Outage Cost Survey, report submitted to Niagara Mohawk Power Corporation.
- 29. Doane, M.J., G. McCelland, W. Schulze and C.K. Woo (1990) Residential Outage Cost Survey, report submitted to Niagara Mohawk Power Corporation.
- 30. Doane, M.J. and C.K. Woo (1988) An Analysis of Customer Subscription to PG&E's Interruptible and Curtailable Rates, report submitted to Pacific Gas and Electric Company.
- 31. Woo, C.K. (1988) Recent Contributions to Customer Outage Cost Estimation, report submitted to Israel Models Limited.
- 32. Doane, M.J. R.S. Hartman, W. Schulze and C.K. Woo (1988) Recommended Approach for Collecting Data on Outage Cost and Value of Service Reliability, report submitted to Niagara Mohawk Power Corporation.
- 33. Woo, C.K. (1987) Review of Existing NMPC Procedures for Collecting Data on Outage Cost and Value of Service Reliability, report submitted to Niagara Mohawk Power Corporation.
- 34. Woo, C.K., (1987) Recent Contributions to the Theory and Measurement of Customer Value of Service Reliability, report submitted to Niagara Mohawk Power Corporation.
- 35. Woo, C.K. (1984) Residential Time of Use Program First and Second Semi-Annual Reports, Pacific Gas and Electric Company Reports filed with the California Public Utilities Commission.
- 36. Woo, C.K. (1983) A-20 Small Commercial Time of Use Experiment, Pacific Gas and Electric Company Reports filed with the California Public Utilities Commission.
- 37. Woo, C.K. and R. Orans (1983) Transferability of Other Utilities' Time of Use Experiments to PG&E's Service Schedule D-7, Pacific Gas and Electric Company Report filed with the California Public Utilities Commission.

Conference Papers

- 1. Tishler, A. and C.K. Woo (2005) "Why is electricity deregulation likely to fail in Israel?" 25th USAEE/IAEE North American Conference, Denver Colorado.
- 2. Woo, C K, Karimov, R I and Lloyd, D (2003) "Did a Local Distribution Company Procure Prudently during the California Electricity Crisis?' International Conference on Energy Market Reform: Issues and Problems, Hong Kong, August 25-26.
- 3. Seeto, D. and C.K. Woo (1995) "Time-of-Use Rates vs. Hopkinson Tariffs in Electricity Pricing," Rutgers University Advanced Workshop in Regulation and Public Utilities Economics, 8th Annual Western Conference, July 5-7, San Diego, California.

- 4. Seeto, D., S.D. He and C.K. Woo (1994) "Regulatory Perspectives of the Harmonics Problem: Pricing Electric Harmonics," 1994 IEEE Summer Power Engineering Society Meeting, July 24-29, San Francisco, California.
- 5. Seeto, D. and C.K. Woo (1994) "Practical Ramsey Pricing of Electricity and Customer Bypass under Regulation," Rutgers University Advanced Workshop in Regulation and Public Utilities Economics, 7th Annual Western Conference, July 6-8, San Diego, California.
- 6. Orans, R., C.K. Woo, B. Horii and R. Pupp (1994) "Estimation and Applications of Area- and Time-Specific Marginal Capacity Costs," Proceedings: 1994 Innovative Electricity Pricing, (February 9-11, Tampa, Florida) Electric Research Power Institute, Report TR-103629, 306-315.
- 7. Heffner, G., R. Orans, C.K. Woo, B. Horii and R. Pupp (1993) "Estimating Area Load and DSM Impact by Customer Class and End-Use," Western Load Research Association Conference, September 22-24, San Diego, California; and Electric Power Research Institute CEED Conference, October 27-29, St. Louis, Missouri.
- 8. Woo, C.K. (1992) "Drought Management: Service Interruption," International Conference on Economics and Government, September 1-4, Gold Coast, Australia.
- 9. Woo, C.K. (1991) "Local Electric Service Reliability as a Public Good," 14th International Association of Energy Economists (IAEE) Conference, East-West Center, Hawaii.
- 10. Keane, D.M. and C.K. Woo (1991) "Using Customer Outage Costs to Plan Generation Reliability," 14th International Association of Energy Economists (IAEE) Conference, East-West Center, Hawaii.
- 11. Woo, C.K. (1990) "Outage Costs as Design Criteria for Product Differentiation," New Service Opportunities for Electric Utilities: Creating Differentiated Products, Symposium sponsored by Electric Power Research Institute and University of California, Berkeley.
- 12. Woo, C.K., B.M. Gray and M.E. Carl (1987) "Residential Air Conditioning Load Model," 8th International Association of Energy Economists (IAEE) Conference, MIT.
- 13. Woo, C.K., (1987) "Fixed Cost Recovery under Competition in Electricity Pricing," 8th International Association of Energy Economists (IAEE) Conference, MIT.