The Brattle Group

A BIBLIOGRAPHY ON DYNAMIC PRICING AND TIME-OF-USE RATES VERSION 2.0

January

2013

Toni Enright Ahmad Faruqui, Ph.D.

PREFACE

This bibliography has been developed from a variety of sources including our reading of the literature, searches that we have performed on the Social Sciences Research Network and Google Scholar, and from contributions from readers like you.

If you don't see an article listed in the bibliography, please send us the full citation.

Thank you very much.

TE and AF

San Francisco, California

- Abbott, Ralph E. (2005). "Time-of-Use Rates: Sideburns and Bellbottoms?" *Energy Markets*, July/August.
- Abbott, Ralph E., Stephen C. Hadden, Jacqueline Lemmerhirt, and William Lockwood (1998). "Direct Access Metering & Data Communications Requirements," NARUC White Paper, March.
- Allcott, Hunt (2011). "Rethinking Real-Time Electricity Pricing," *Resource and Energy Economics*, 33(4): 820-842.
- Alter, Noel and Syed, Shabib Haider (2011). "An Empirical Analysis of Electricity Demand in Pakistan," *International J. of Energy Economics and Policy*, 1:4, 116-139.
- Aubin, Christophe, Denis Fougere, Emmanuel Husson, and Marc Ivaldi (1995). "Real-Time Pricing of Electricity for Residential Customers: Econometric Analysis of an Experiment," *Journal of Applied Econometrics*, 10, S171-191.
- Baladi, S.M., J.A. Herriges, and T.J. Sweeney (1998). "Residential Response to Voluntary Time-of-Use Electricity Rates," *Resource and Energy Economics*, 20:225-244.
- Bandt, William D., Tom Campbell, Carl Danner, Harold Demsetz, Ahmad Faruqui, Paul R. Kleindorfer, Robert Z. Lawrence, David Levine, Phil McLeod, Robert Michaels, Shmuel S. Oren, Jim Ratliff, John G. Riley, Richard Rumelt, Vernon L. Smith, Pablo Spiller, James Sweeney, David Teece, Philip Verleger, Mitch Wilk, and Oliver Williamson (2003). "2003 Manifesto on the California Electricity Crisis," May. The manifesto can be accessed at this web site: http://regulation2point0.org/wp-content/uploads/downloads/2010/04/phpy1.pdf
- Bode, Josh and Paul Mangasarian (2010). "SDG&E Non-residential Default Critical Peak Pricing Analysis of Enrollment Choices," August 18.
- Bode, Josh, Stephen George and Sam Holmberg (2011). "Estimating Default Dynamic Pricing Price Responsiveness for Medium C&I Customers," presented at the 2011 International Energy Program Evaluation Conference in Boston, MA, August 15-18.
- Boiteux, Marcel, 1964. "Peak Load Pricing." Journal of Business, 33(2): 157-179.
- Borenstein, Severin (2002). "The Trouble with Electricity Markets: Understanding California's Restructuring Disaster," *Journal of Economic Perspectives*, 16:1, 191-211, Winter.
- Borenstein, Severin (2005). "The Long-run Efficiency of Real-Time Pricing," *The Energy Journal*, 26(3): 93-116.
- Borenstein, Severin (2005). "Time-Varying Retail Electricity Prices: Theory and Practice," in Griffin and Puller, eds., Electricity Deregulation: Choices and Challenges, Chicago: University of Chicago Press.
- Borenstein, Severin (2005). "Wealth Transfers from Implementing Real-Time Retail Electricity Pricing." National Bureau of Economic Research Working Paper 11594, August.
- Borenstein, Severin (2007). "Customer Risk from Real-Time Retail Electricity Pricing: Bill Volatility and Hedgability," *The Energy Journal*, 28(2).

- Borenstein, Severin (2007). "Wealth Transfers Among Large Customers from Implementing Real-Time Retail Electricity Pricing," *The Energy Journal*, 28(2).
- Borenstein, Severin (2009). "To What Electricity Price Do Consumers Respond? Residential Demand Elasticity Under Increasing-Block Pricing," Draft.
- Borenstein, Severin (2010). "The Redistributional Impact of Non-Linear Electricity Pricing," NBER Working Paper No. 15822.
- Borenstein, Severin (2012). "Effective and Equitable Adoption of Opt-In Residential Dynamic Electricity Pricing," Energy Institute at Haas Working Paper #229, U.C. Berkeley, April.
- Borenstein, Severin and S. Holland (2005). "On the Efficiency of Competitive Electricity Markets with Time-Invariant Retail Prices," *Rand Journal of Economics*, 36(3): 469-493.
- Borenstein, Severin, Michael Jaske, and Arthur Rosenfeld (2002). "Dynamic Pricing, Advanced Metering and Demand Response in Electricity Markets." Center for the Study of Electricity Markets, Paper CSEMWP 105, October 31.
- Braithwait, Steven D. (2000). "Residential TOU Price Response in the Presence of Interaction Communication Equipment," in *Pricing in Competition Electricity Markets*, A. Faruqui and K. Eakin, eds., Kluwer Academic Publishers, Amsterdam.
- Braithwait, Steven D. (2005). "Evaluating RTP Price Response the Effect of Market and Environmental Conditions," International Energy Program Evaluation Conference, New York, August.
- Braithwait, Steven D. (2009). "Evaluation of Demand Responsive Pricing and Bidding Programs for Large Commercial and Industrial Customers," International Energy Program Evaluation Conference, Portland, OR, July.
- Braithwait, Steven D. (2010). "Behavior Modification: Creating Price-Responsive Demand through Retail Pricing and Demand Response Programs," *IEEE Power and Energy Magazine*, Vol. 8, No. 3, May/June.
- Braithwait, Steven D. and Daniel Hansen (2012). "How Large Commercial and Industrial Customers Respond to Dynamic Pricing The California Experience," in *Smart Grid: Integrating Renewable, Distributed and Efficient Energy*, Fereidoon Sioshansi, ed., Academic Press.
- Braithwait, Steven D. and Michael O'Sheasy (2002). "RTP Customer Demand Response— Empirical Evidence on How Much Can You Expect," in *Electricity Pricing in the Transition*, A. Faruqui and K. Eakin, eds., Kluwer Academic Publishers, Amsterdam.
- Braithwait, Steven D., Daniel Hansen, and David Armstrong (2010). "2009 Load Impact Evaluation of California Statewide Aggregator Demand Response Programs: Ex Post and Ex Ante Report," CALMAC Study ID PGE0285, April 21.
- Braithwait, Steven D., Daniel Hansen, and David Armstrong (2011). "2010 Load Impact Evaluation of California Statewide Aggregator Demand Response Programs: Ex Post and Ex Ante Final Report," CALMAC Study ID SCE0295, March 29.

- Braithwait, Steven D., Daniel Hansen, and David Armstrong (2012). "2011 Impact Evaluation of San Diego Gas & Electric's Peak-Time Rebate Pilot Program: Ex-Post and Ex-Ante Report," CALMAC Study ID SDG 0255, May 31.
- Braithwait, Steven D., Daniel Hansen, and Jess D. Reaser (2010). "2009 Load Impact Evaluation of California Statewide Critical-Peak Pricing Rates for Non-Residential Customers: Ex Post and Ex Ante Report," CALMAC Study ID SDG244, April 19.
- Braithwait, Steven D., Daniel Hansen, and Jess D. Reaser (2012). "2011 Load Impact Evaluation of California Statewide Demand Bidding Programs (DBP) for Non-Residential Customers: Ex Post and Ex Ante Report," CALMAC Study ID SCE0317, May 29.
- Braithwait, Steven D., D. Hansen, M. Hilbrink, and L. Kirsch (2011). "The Effect on Electricity Consumption of the Commonwealth Edison Customer Applications Program: Phase 2 Final Analysis," EPRI 1023644 Technical Update, October (with M. Wakefield, G. Horst, B. Neenan (EPRI), and R. Boisvert (Cornell University)).
- Bushnell, James B. and Erin T. Mansur (2005). "Consumption under Noisy Price Signals: A Study of Electricity Retail Rate Deregulation in San Diego," *Journal of Industrial Economics*, 53 (4), 493–513.
- California Energy Commission (2008). "Proposed Load Management Standards," Draft Committee Report, November, CEC-400-2008-027-CTD.
- California Energy Commission Demand Response Committee (2003). "Feasibility of Implementing Dynamic Pricing in California," report to the California Legislature, CEC Report 400-03-020F, October.
- Capgemini (2009). "Demand Response: a decisive breakthrough for Europe," May.
- Caves, D.W. and L.R. Christensen (1980). "Econometric Analysis of Residential Time-of-Use Electricity Pricing Experiments," *Journal of Econometrics*, 14(3):287-306.
- Caves, D.W. and L.R. Christensen (1980). "Residential Substitution of Off-Peak for Peak Electricity Usage under Time-of-Use Pricing," *The Energy Journal*, 1(2):85-142.
- Caves, D.W., L.R. Christensen and J.A. Herriges (1984). "Consistency of Residential Customer Response in Time-of-Use Electricity Pricing Experiments," *Journal of Econometrics*, 26(1-2): 179-203.
- Caves, D.W., L.R. Christensen and J.A. Herriges (1984). "Modeling Alternative Residential Peak-Load Electricity Rate Structures," *Journal of Econometrics*, 24:249-268.
- Caves, D.W., L.R. Christensen and J.A. Herriges (1987). "The Neoclassical Model of Consumer Demand with Identically Priced Commodities: An Application to Time-of-Use Electricity Pricing," *The RAND Journal of Economics*, (18) 4.
- Caves, D.W., J.A. Herriges and K. Kuester (1989). "Load Shifting Under Voluntary Residential Time-of-Use Rates," *The Energy Journal*, 10(4).
- Caves, D.W., L.R. Christensen, W.E. Hendricks and P.E. Schoech (1982). "Cost-Benefit Analysis of Residential Time of Use Rates: A Case Study for Four Illinois Utilities," *Electric Ratemaking*, Vol. 1, No. 6.

- Caves, D.W., L.R. Christensen, P.E. Schoech and W. Hendricks (1984). "A Comparison of Different Methodologies in a Case Study of Residential Time-of-Use Electricity Pricing Cost-Benefit Analysis," *Journal of Econometrics*, 26:17-34.
- Chao, Hung-po (1983). "Peak-Load Pricing and Capacity Planning with Demand and Supply Uncertainty," *Bell Journal of Economics*, 14(1): 170-90.
- Chao, Hung-po and Robert Wilson (1987). "Priority Service: Pricing, Investment and Market Organization," *American Economic Review*, 77:5, 899-916.
- Charles River Associates (2005). "Impact Evaluation of the California Statewide Pricing Pilot," March 16. The report can be downloaded from: http://www.calmac.org/publications/2005-03-24 SPP_FINAL_REP.pdf
- Chetty, Raj, John N. Friedman, Tore Olsen, and Luigi Pistaferri (2010). "Adjustment Costs, Firm Responses, and Labor Supply Elasticities: Evidence from Danish Tax Records," *National Bureau of Economic Research Working Paper Series*, No. 15617.
- Colebourn H. (2006). "Network Price Reform." presented at BCSE Energy Infrastructure& Sustainability Conference, December.
- Commission for Energy Regulation (2011). "Electricity Smart Metering Customer Behaviour Trials (CBT) Findings Report," May 16, Dublin, Ireland.
- Crew, Michael A., Chitru S. Fernando and Paul R. Kleindorfer (1995). "The Theory of Peak Load Pricing: A Survey," *Journal of Regulatory Economics*, 8: 215-248.
- Darby, Sarah J. and Eoghan McKenna (2012). "Social Implications of Residential Demand Response in Cool Temperate Climates," *Energy Policy*, Vol. 49, 759-769.
- eMeter Strategic Consulting (2010). "PowerCentsDC Program: Final Report," prepared for the Smart Meter Pilot Program, Inc., September.
- Energy Insights Inc. (2008). "Experimental Residential Price Response Pilot Program March 2008 Update to the 2007 Final Report," March.
- Energy Insights Inc. (2008). "Xcel Energy TOU Pilot Final Impact Report," March.
- Faruqui, Ahmad (2002). "Pricing reform in developing countries," *Power Economics*, September, pp. 13-15.
- Faruqui, Ahmad (2003). "Toward post-modern pricing," Guest Editorial, *The Electricity Journal*, July.
- Faruqui, Ahmad (2005). "Applications of Dynamic Pricing in Developing and Emerging Economies," prepared for The World Bank, Washington, D.C., May.
- Faruqui, Ahmad (2006). "2050: A Pricing Odyssey," *The Electricity Journal*, October. http://www.puc.nh.gov/Electric/06061/epact%20articles/EJ%202050%20%20A%20Pricing%20Odyssey.pdf
- Faruqui, Ahmad (2007). "Breaking out of the bubble: using demand response to mitigate rate shock," 46-51, *Public Utilities Fortnightly*, March.

- Faruqui, Ahmad (2007). "From Smart Metering to Smart Pricing," *Metering International*, Issue 1. http://www.brattle.com/ documents/UploadLibrary/ArticleReport2439.pdf
- Faruqui, Ahmad (2007). "Pricing Programs: Time-of-Use and Real Time," *Encyclopedia of Energy Engineering and Technology*, September, pp. 1175-1183. http://www.drsgcoalition.org/resources/other/Pricing_Programs_TOU_and_RTP.pdf
- Faruqui, Ahmad (2010). "The Ethics of Dynamic Pricing," The Electricity Journal, 23(6): 13-27.
- Faruqui, Ahmad (2010-2011). "Residential Dynamic Pricing and 'Energy Stamps," *Regulation*, Volume 33, No. 4, Winter, pp. 4-5. http://www.cato.org/pubs/regulation/regv33n4/v33n4.html
- Faruqui, Ahmad (2012). "Dynamic Pricing for Residential and Small C&I Customers," presented at the Ohio Public Utilities Commission Technical Workshop, March 28. http://www.brattle.com/_documents/UploadLibrary/Upload1026.pdf
- Faruqui, Ahmad and B. Kelly Eakin (2000). *Pricing in Competitive Electricity Markets*, Kluwer Academic Publishers.
- Faruqui, Ahmad and B. Kelly Eakin (2002). *Electricity Pricing in Transition*, Kluwer Academic Publishers.
- Faruqui, Ahmad and Robert Earle (2008). "Avoiding Load Shedding by Smart Metering and Pricing," *Metering International*, Issue 1, pp. 76-77.
- Faruqui, Ahmad and Stephen S. George (2003). "Demise of PSE's TOU Program Imparts Lessons." *Electric Light & Power*, Vol. 81.01:14-15.
- Faruqui, Ahmad and Stephen S. George (2003). "Dynamic pricing for the mass market: California experiment," *Public Utilities Fortnightly*, July 1, pp. 33-35.
- Faruqui, Ahmad and Stephen S. George (2002). "Reforming pricing in retail markets," *Electric Perspectives*, September/October, pp. 20-21.
- Faruqui, Ahmad and Stephen S. George (2002). "The Value of Dynamic Pricing in Mass Markets," *The Electricity Journal*, 15:6, 45-55.
- Faruqui, Ahmad and Stephen S. George (2005). "California pricing experiment yields new insights on customer behavior," Electric Light & Power, May/June.

 http://www.elp.com/index/display/article-display/229131/articles/electric-light-power/volume-83/issue-3/departments/news/california-pricing-experiment-yields-new-insights-on-customer-behavior.html
- Faruqui, Ahmad and Stephen S. George (2005). "Quantifying Customer Response to Dynamic Pricing," *The Electricity Journal*, 18(4): 53-63.
- Faruqui, Ahmad and Ryan Hledik (2009). "Transition to Dynamic Pricing," *Public Utilities Fortnightly*, March, pp. 26-33. http://www.fortnightly.com/display_pdf.cfm?id=03012009_DynamicPricing.pdf

- Faruqui, Ahmad and J. Robert Malko (1980). "Implementing Time-Of-Day Pricing of Electricity: Some Current Challenges and Activities," *Issues in Public Utility Pricing and Regulation*, edited by M. A. Crew, Lexington Books.
- Faruqui, Ahmad and J. Robert Malko (1983). "The Residential Demand for Electricity by Time-Of-Use: A Survey of Twelve Experiments with Peak Load Pricing," *Energy*, Volume 8, Issue 10, October.
- Faruqui, Ahmad and J. Robert Malko (1999). Customer Choice: Finding Value in Retail Electricity Markets, Public Utilities Reports, Inc.
- Faruqui, Ahmad and Melanie Mauldin (2002). "The barriers to real-time pricing: separating fact from fiction," *Public Utilities Fortnightly*, July 15, pp. 30-40.
- Faruqui, Ahmad and Doug Mitarotonda (2011). "Energy Efficiency and Demand Response in 2020: A Survey of Expert Opinion," *The Brattle Group*, November. http://www.brattle.com/documents/UploadLibrary/Upload990.pdf
- Faruqui, Ahmad and Jenny Palmer (2011). "Dynamic Pricing and its Discontents," *Regulation*, Fall. http://www.cato.org/pubs/regulation/regv34n3/regv34n3-5.pdf
- Faruqui, Ahmad and Jennifer Palmer (2012). "The Discovery of Price Responsiveness A Survey of Experiments Involving Dynamic Pricing of Electricity," *EDI Quarterly*, 4(1): 15-18.
- Faruqui, Ahmad and Sanem Sergici (2009). "BGE's Smart Energy Pricing Pilot: Summer 2008 Impact Evaluation," prepared for Baltimore Gas & Electric Company, April 28.
- Faruqui, Ahmad and Sanem Sergici (2009). "Impact Evaluation of BGE's SEP 2009 Pilot: Residential Class Persistence Analysis," presented to Baltimore Gas and Electric Company, October 23.
- Faruqui, Ahmad and Sanem Sergici (2009). "Impact Evaluation of NU's Plan-It Wise Energy Program: Final Results," November 2.
- Faruqui, Ahmad and Sanem Sergici (2010). "Household Response to Dynamic Pricing of Electricity A Survey of 15 Experiments," *Journal of Regulatory Economics*, 38(2): 193-225.
- Faruqui, Ahmad and Sanem Sergici (2011). "Dynamic Pricing of Electricity in the Mid-Atlantic Region: Econometric results from the Baltimore Gas and Electric Company experiment," *Journal of Regulatory Economics*, 40(1): 82-109.
- Faruqui, Ahmad and Dan Violette (2003). "Electricity Pricing: Lessons from the Front," white paper based on the May 2003 AESP/EPRI Pricing Conference, Chicago, Illinois, EPRI Technical Update 1002223, December.
- Faruqui, Ahmad and Lisa Wood (2008). "Quantifying the Benefits of Dynamic Pricing in the Mass Market," prepared for the Edison Electric Institute, January.
- Faruqui, Ahmad, Dennis Aigner, and Robert T. Howard (1981). "Customer Response to Time of Use Rates: Topic Paper I," Electric Utility Rate Design Study, EPRI.

- Faruqui, Ahmad, Robert Earle, and Anees Azzouni (2005). "Reforming electricity pricing in the Middle East," *Middle East Economic Survey (MEES)*, December 5.
- Faruqui, Ahmad, Ryan Hledik, and Bernie Neenan (2007). "Rethinking Rate Design," issue paper prepared for the Demand Response Research Center, Lawrence Berkeley National Laboratory.
- Faruqui, Ahmad, Ryan Hledik and Jennifer Palmer (2012). "Time-Varying and Dynamic Rate Design," prepared for the Regulatory Assistance Project (RAP), July. http://www.raponline.org/document/download/id/5131
- Faruqui, Ahmad, Ryan Hledik, and Sanem Sergici (2009). "Piloting the Smart Grid," *The Electricity Journal*, 22(7): 55-69.
- Faruqui, Ahmad, Ryan Hledik, and John Tsoukalis (2009). "The Power of Dynamic Pricing," *The Electricity Journal*, April, pp. 42-56. http://www.sciencedirect.com/science/article/pii/S1040619009000414
- Faruqui, Ahmad, Jennifer Palmer and Sanem Sergici (2010). "The Untold Story: A Survey of C&I Dynamic Pricing Pilot Studies," *Metering International*, ISSN: 1025-8248, Issue: 3, p.104.
- Faruqui, Ahmad, Sanem Sergici and Lamine Akaba (2011). "Impact Evaluation of the SEP 2010 Pilot," presented to Baltimore Gas and Electric Company, March 22.
- Faruqui, Ahmad, Sanem Sergici and Lamine Akaba (2012). "Dynamic Pricing of Electricity for Residential Customers: The Evidence from Michigan,"

 June. http://ssrn.com/abstract=2072658
- Faruqui, Ahmad, Sanem Sergici and Lamine Akaba (2012). "Dynamic Pricing in a Moderate Climate: The Evidence from Connecticut," March.

 http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2028178
- Faruqui, Ahmad, Sanem Sergici, and Jennifer Palmer, (2010). "The Impact of Dynamic Pricing on Low Income Customers," Institute for Electric Efficiency, Washington, D.C., September.

 http://www.edisonfoundation.net/IEE/Documents/IEE_LowIncomeDynamicPricing_091_0.pdf
- Faruqui, Ahmad, Sanem Sergici and Lisa Wood (2009). "Moving Toward Utility-Scale Deployment of Dynamic Pricing in Mass Markets," Institute for Electric Efficiency, June.
- Faruqui, Ahmad, Ryan Hledik, Samuel Newell, and Johannes Pfeifenberger (2007). "The Power of Five Percent." *The Electricity Journal*, Vol. 20, Issue 8:68-77.
- Faruqui, Ahmad, Phil Hanser, Ryan Hledik and Jenny Palmer (2010). "Assessing Ontario's Regulated Price Plan," prepared for the Ontario Energy Board, December 8. http://www.smartgridinformation.info/pdf/4542 doc 1.pdf
- Faruqui, Ahmad, Ryan Hledik, Armando Levy, and Alan Madian (2011). "Smart Pricing, Smart Charging," *Public Utility Fortnightly*, Volume 149, Number 10, October. http://www.fortnightly.com/archive/puf archive 1011.cfm

- Faruqui, Ahmad, Hung-po Chao, Victor Niemeyer, Jeremy Platt and Karl Stahlkopf (2001). "Analyzing California's Power Crisis," *The Energy Journal*, Vol. 22, No. 4, 29-52.
- Faruqui, Ahmad, Hung-po Chao, Victor Niemeyer, Jeremy Platt and Karl Stahlkopf (2001). "Getting out of the dark," *Regulation*, Fall, 58-62.
- Faruqui, Ahmad, Doug Mitarotonda, Lisa Wood, Adam Cooper, and Judith Schwartz (2011). "The Costs and Benefits of Smart Meters for Residential Customers," whitepaper prepared for the Institute for Electric Efficiency, July.
- Faruqui, Ahmad, Sanem Sergici and Lamine Akaba (2011), "Michigan Speaks: Consumer Energy's Dynamic Pricing Experiment," presented at Rutgers University's CRRI Advanced Workshop on Regulation, Monterey, California, June 16. An earlier version can be downloaded from http://www.peaklma.com/Files/Dynamic%20Pricing%20-%20Faruqui.pdf
- Federal Energy Regulatory Commission (2008). "Assessment of Demand Response and Advanced Metering," Staff Report, Washington, D.C.
- Federal Energy Regulatory Commission Staff (2009). *A National Assessment of Demand Response Potential*, June. http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf
- Filippini, Massimo (1995). "Swiss Residential Demand for Electricity by Time-of-Use: An Application of the Almost Ideal Demand System," *Energy Journal*, 16:1, 27-39.
- George, Stephen and Jose Bode (2008). "2008 Ex Post Load Impact Evaluation for Pacific Gas and Electric Company's SmartRateTM Tariff," December 30.
- George, Stephen, Josh L. Bode, and Elizabeth Hartmann (2011). "2010 Load Impact Evaluation of Pacific Gas and Electric Company's Time-Based Pricing Tariffs," April 1.
- George, Stephen Josh Bode and Elizabeth Hartmann (2011). "The Impact of Bill Protection on Demand Response and Program Retention under a Residential CPP Rate," presented at the 2011 International Energy Program Evaluation Conference in Boston, MA, August 15-18.
- George, Stephen, Josh Bode, Sam Holmberg (2012). "2011 California Statewide Non-residential Critical Peak Pricing Evaluation," June 1.
- George, Stephen, Josh Bode, Sam Holmberg, and Peter Malaspina (2012). "2011 Ex Ante Load Impacts for PG&E's Non-residential TOU Rates." June 1.
- George, Stephen, Josh Bode, Michael Perry, and Andrew Goett (2010). "2009 Load Impact Evaluation for Pacific Gas and Electric Company's Residential SmartRateTM—Peak Day Pricing and TOU Tariffs and SmartAC Program Volume 2: Ex Ante Load Impacts," April 1.
- George, Stephen, Josh Bode, Michael Perry, and Zach Mayer (2010). "2009 Load Impact Evaluation for Pacific Gas and Electric Company's Residential SmartRateTM—Peak Day Pricing and TOU Tariffs and SmartAC Program Volume 1: Ex Post Load Impacts," April 1.

- George, Stephen, Josh Bode, Josh Schellenberg, and Sam Holmberg (2011). "2010 California Statewide Non-Residential Critical Peak Pricing Evaluation," April 1.
- George, Stephen, Josh Schellenberg, Peter Malaspina, Dries Berghman (2012). "2011 Load Impact Estimates for Southern California Edison's Demand Response Programs: Agricultural and Pumping Interruptible Program Real Time Pricing," June 1.
- George, Stephen, Josh Bode, Josh Schellenberg, Paul Mangasarian, Zach Mayer (2009). "2008 Load Impact Estimates for SCE's Demand Response Programs: Residential and Commercial Summer Discount Plan Agricultural and Pumping Interruptible Program Real Time Pricing Optional Binding Mandatory Curtailment," May 1.
- George, Stephen, Michael Perry, Josh Bode, Elizabeth Hartmann, and Dries Berghman (2012). "2011 Load Impact Evaluation of Pacific Gas and Electric Company's Residential Timebased Pricing Programs," June 1.
- George, Stephen, Michael Perry, Josh Schellenberg, Peter Malaspina, and Sam Holmberg (2010). "2010 Load Impact Estimates for SCE's Demand Response Programs: Residential and Commercial Summer Discount Plan, Agricultural and Pumping Interruptible Program, Real Time Pricing," April.
- George, Stephen, Josh Bode, Michael Perry, Josh Schellenberg, Matt Mercurio, and Paul Mangasarian (2010). "2009 Load Impact Estimates for SCE's Demand Response Programs: Residential and Commercial Summer Discount Plan, Agricultural and Pumping Interruptible Program, Real Time Pricing," April.
- Giraud, Denise (1994). "A New Real-Time Tariff for Residential Customers," in Proceedings: 1994 Innovative Electricity Pricing Conference, EPRI TR-103629, February.
- Giraud, Denise (2004). "The tempo tariff," Efflocon Workshop, June 10. http://www.efflocom.com/pdf/EDF.pdf.
- Granger Morgan, M. and Sarosh N. Talukdar (1979). "Electric Power Load Management: Some Technical;, Economic, Regulatory and Social Issues, Proceedings of the IEEE, Vol.67, No. 2, February.
- Herriges, J.A., S.M. Baladi, D.W. Caves, and B.F. Neenan (1993). "The Response of Industrial Customers to Electric Rates Based Upon Dynamic Marginal Costs," *Review of Economics and Statistics*, p. 446-454.
- Herter Energy Research Solutions (2012). "SMUD's Residential Summer Solutions Study An investigation of the effects of real-time information, dynamic pricing, and thermostat automation on residential energy conservation, peak load shifting, and demand response," prepared for the Demand Response Research Center at Lawrence Berkeley National Laboratory and the Sacramento Municipal Utility District, February.
- Herter, Karen (2007). "Residential implementation of critical-peak pricing of electricity," *Energy Policy*, 35(4): 2121-2130.
- Herter, Karen and Seth Wayland (2010). "Residential Response to Critical Peak Pricing of Electricity: California Evidence, *Energy*, 35(4): p. 1561-1567.

- Herter, Karen, Patrick McAuliffe, and Arthur Rosenfeld (2007). "An Exploratory Analysis of California Residential Customer Response to Critical Peak Pricing of Electricity," *Energy*, 32(1): 25-34.
- Herter, Karen, Seth Wayland, and Josh Rasin (2009). "Small Business Demand Response with Communicating Thermostats: SMUD's Summer Solutions Research Pilot," LBNL-2742E, September.
- Houthakker, Hendrik (1951). "Electricity Tariffs in Theory and Practice." *The Economic Journal*, 61:241, March, 1-25.
- Hydro One Networks, Inc. (2008). "Time of Use Pricing Pilot Project Results," Report EB-2007-0086, May.
- IBM and eMeter Strategic Consulting (2007). "Ontario Energy Board Smart Price Pilot Final Report," July.
- Idaho Power Company (2006). "Analysis of the Residential Time-of-Day and Energy Watch Pilot Programs: Final Report." December.
- Jessoe, Katrina and David Rapson (2012). "Knowledge is (Less) Power: Experimental Evidence from Residential Energy Use," UC Center for Energy and Environmental Economics Working Paper Series, E3 WP-046, pp. 1-45, August.
- Jones, Stephen R. G. (1992). "Was there a Hawthorne effect?" *American Journal of Sociology*, 98(3): 451–468.
- Joskow, Paul L. (2012). "Creating a Smarter U.S. Electricity Grid." *Journal of Economic Perspectives* 26 (1):29–48.
- Joskow, Paul L. and Catherine D. Wolfram (2012). "Dynamic Pricing of Electricity." *American Economic Review* 102 (3):381–85.
- Kahn, Alfred E. (1988). "The Economics of Regulation: Principles and Institutions."
- Kiesling, Lynne (2008). "Digital Technology, Demand Response, and Customer Choice: Efficiency Benefits," NARUC Winter Meetings, Washington, D.C., February 18.
- King, K. (1994). "The Impact of Real-Time Pricing: Evidence from the British Experience," Proceedings: EPRI Innovative Electricity Pricing Conference, Tampa.
- King, Chris (2003). "Predicting California Demand Response: How do customers react to hourly prices?," *Public Utilities Fortnightly*, July 1.
- Kirkeide, Loren (2012). "Effects of Three Hour On-Peak Time-of-Use Plan on Residential Demand During Hot Phoenix Summers," *The Electricity Journal*, 25:4, May.
- Klos, Mary, Bill Provencher, Daniel Violette, Peter Steele-Mosey and Bethany Vittetoe (2011). "Power Smart Pricing 2010 Annual Report" report to Ameren Illinois Utilities for Illinois Commerce Commission, Case 06-0693.

http://www.icc.illinois.gov/downloads/public/edocket/292827.pdf http://www.icc.illinois.gov/downloads/public/edocket/292828.pdf http://www.icc.illinois.gov/downloads/public/edocket/292829.pdf (Part 1, Part 2 and Part 3)

The Brattle Group

- Lawrence, A.G. and S.D. Braithwait (1979). "The Residential Demand for Electricity by Time-of-Day: An Econometric Analysis," *Journal of Econometrics*, Vol. 9.
- Levin, Robert (2011). "Time-Variant Pricing for California's Small Electric Consumers," CPUC Division of Ratepayer Advocates, May.
- Levy, Roger, Ralph Abbot, and Stephen Hadden (2002). "New Principles for Demand Response Planning," EPRI EP-P6035/C3047, March.
- Liebman, Jeffrey and Richard Zeckhauser (2004). "Schmeduling," Manuscript, Harvard University.
- Littlechild, Stephen C. (2003). "Wholesale Spot Price Pass-Through," *Journal of Regulatory Economics*, 23(1): 61-91.
- Matsukawa, Isamu (2001). "Household Response to Optional Peak-Load Pricing of Electricity," *Journal of Regulatory Economics*, 20:3, 249-261.
- McDonough, Catherine and Robert Kraus (2007). "Does Dynamic Pricing Make Sense for Mass Market Customers?," *Electricity Journal*, Aug./Sept.
- McDonough, Catherine and Robert Kraus (2009). "Dynamic Pricing Solutions," *Public Utilities Fortnightly*, January.
- Morgan, Rick (2009). "Rethinking 'Dumb' Rates," *Public Utilities Fortnightly*, pp. 34-38, March.
- Navigant Consulting (2008). "Evaluation of Time-of-Use Pricing Pilot for Newmarket Hydro, Ltd.," March 4.
- Newsham, Guy R. and Brent G. Bowker (2010). "The Effect of Utility Time-Varying Pricing and Load Control Strategies on Residential Summer Peak Electricity Use: A review," *Energy Policy*, 38(7): 3289–96.
- Ontario Energy Board (2007). "Ontario Energy Board Smart Price Pilot Final Report," Toronto, Ontario, July.
- Pacific Northwest National Laboratory (2007). "Pacific Northwest GridWise Testbed Demonstration Projects Part 1: Olympic Peninsula Project," Richland, Washington, October.
- Pfannenstiel, Jackie and Ahmad Faruqui (2008). "Mandating Demand Response," *The Public Utilities Fortnightly*, January.
- Pöyry Management Consulting (2011). "Assessment of DSR Price Signals," report for U.K. Department of Environment and Climate Change, December.
- PSE&G and Summit Blue Consulting (2007). "Final Report for the Mypower Pricing Segments Evaluation." Newark, New Jersey, December.
- Provencher, Bill, Mary Klos, Randy Gunn, Peter Steele-Mosey and Bethany Vittetoe (2011). "Evaluation of the Residential Real Time Pricing Program, 2007-2010" report to Commonwealth Edison Company for Illinois Commerce Commission, Case 06-0617. http://www.icc.illinois.gov/downloads/public/edocket/296671.pdf http://www.icc.illinois.gov/downloads/public/edocket/296673.pdf

13

The Brattle Group

- (Part 1 and Part 2)
- Reiss, Peter C. and Matthew W. White (2008). "What changes energy consumption? Prices and public pressures," *The Rand Journal of Economics*, Vol. 39, No. 3, Autumn, 636-663.
- RLW Analytics (2004). "AmerenUE Residential TOU Pilot Study Load Research Analysis: First Look Results," February.
- Rocky Mountain Institute (2006). "Automated Demand Response System Pilot: Final Report," Snowmass, Colorado, March.
- Rowlands, Ian H. and Ian M. Furst (2011). "The Cost Impacts of a Mandatory Move to Time-of-Use Pricing on Residential Customers: An Ontario (Canada) case-study," *Energy Efficiency*, 4(4): 571-85.
- Schare, S. (2007). "Designing TOU Rates for Optimal Peak Load Shifting and Customer Savings," *Strategies*, Association of Energy Services Professionals, December.
- Schare, S. (2008). "TOU Rates As If Prices Mattered: Reviving an Industry Standard for Today's Utility Environment," *American Council for an Energy-Efficient Economy (ACEEE)* Summer Study, August.
- Schwartz, Judith (2011). "The 2011 State of the Consumer Report," Smart Grid Consumer Collaborative, January.
- Schwartz, Judith (2011). "National Action Plan on DR: Communications Umbrella Action Guide," To the Point, July 7.
- Schwartz, Judith (2012). "Salt River Project: The Persistence of Consumer Choice," Association for Demand Response and Smart Grid, June 15.
- Schwartz, Judith, Dan Griffin, and Charles Birdie (2011). "PowerCentsDC: A Model for Stakeholder Collaboration," National Action Plan Coalition.
- Schweppe, Fred C., Michael C. Caramanis, Richard D. Tabors and Roger E. Bohn (1988). "Spot Pricing of Electricity" (Kluwer Academic Publishers, Boston, MA, 1988) pp. 355, ISBN 0-89838-260-2, Dfl 205.00, [UK pound]54.25.
- Shin, Jeong-Shik (1985). "Perception of Price When Price Information Is Costly: Evidence from Residential Electricity Demand," *The Review of Economics and Statistics*, 67 (4), 591–98.
- Simshauser, Paul and David Downer (2012). "Dynamic Pricing and the Peak Electricity Load Problem," *The Australian Economic Review* 45(3): 305-324.
- Star, A. (2009). "Why Getting Dynamic Pricing Right Is More Important Now Than Ever." Blog entry for www.itsyoursmartgrid.com, October.
- Star, A., Isaacson M., and L. Kotewa (2010). "Evaluating Residential Real-Time Pricing: Connecting Customer Response to Energy Market Impacts." International Energy Program Evaluation Conference Proceedings, June.
- Star, A., Evens, A., Isaacson, M. and L. Kotewa (2008). "Making Waves In The Heartland: How Illinois' Experience With Residential Real-Time Pricing Can Be A National Model." ACEE Proceedings, 2:281-291.

14

The Brattle Group

- Star, A., Isaacson, M., Haeg, D. and L. Kotewa (2010). "The Dynamic Pricing Mousetrap: Why Isn't the World Beating Down Our Door?" ACEEE Proceedings, 2:257-268.
- Star, A., Isaacson, M., Kotewa, L., and M. Ozog (2006). "Real-time Pricing is the Real Deal: An Analysis of the Energy Impacts of Residential Real-Time Pricing." ACEEE Proceedings 5:316-327.
- Summit Blue Consulting, LLC. (2006). "Evaluation of the 2005 Energy-Smart Pricing Plan-Final Report." Boulder, Colorado. August.
- Summit Blue Consulting, LLC. (2007). "Evaluation of the 2006 Energy-Smart Pricing Plan-Final Report," Boulder, Colorado, December.

 http://www.energetics.com/madri/toolbox/pdfs/pricing/mypower_pricing_final_report_20

 07.pdf
- Taylor, Thomas N., Peter M. Schwarz, and James E. Cochell (2005). "24/7 Hourly Response to Electricity Real-Time Pricing with up to Eight Summers of Experience," *Journal of Regulatory Economics*, 27:3, 235-262.
- Thorsnes, Paul, John Williams, and Rob Lawson (2012). "Consumer Responses to Time Varying Prices for Electricity," *Energy Policy*, Vol. 49, 552-561.
- Torriti, Jacopo (2012). "Price-based Demand Side Management: Assessing the impacts of time-of-use tariffs on residential electricity demand and peak shifting in Northern Italy," *Energy*, 44, 576-583.
- Turvey, Ralph (1968). "Peak-Load Pricing," Journal of Political Economy, Vol. 76, pages 101.
- U.S. Demand Response Coordinating Committee (2008). "Demand Response and Smart Metering Policy Actions since the Energy Policy Act of 2005: A Summary for State Officials," The National Council on Electricity Policy, Fall.
- U.S. Department of Energy (2006). "Benefits of Demand Response in Electricity Markets and Recommendations for Achieving Them: A Report to the United States Congress Pursuant to Section 1252 of the Energy Policy Act of 2005," February.
- VaasaETT (2011). "Empower Demand: The potential of smart meter enabled programs to increase energy and systems efficiency: a mass pilot comparison," October.
- Vickrey, W. S. (1971). "Responsive Pricing of Public Utility Services," *Bell Journal of Economics*, 2(1): 337-46.
- Violette. D.M. and B. Provencher (2010). "Evaluating the Impacts of Energy Efficiency Rate Design," B.C Hydro Peer Review Panel on Rate Design and Energy Efficiency, November.
- Violette, D.M. and B. Provencher (2011). "Hourly Demand Analysis for TOU Rates: A Disaggregated Demand Function Approach," Annual Meetings of the American Edison Illuminating Companies (AEIC) Load Research Committee, forth coming, March.
- Violette, D., and A. Star (2010). "Evaluating Residential Real-Time Pricing: Can Price Based Demand Response Lower Prices for Everyone?" International Energy Program Evaluation Conference.

- Voytas, Rick (2006). "AmerenUE Critical Peak Pricing Pilot." presented at U.S. Demand Response Research Center Conference, Berkeley, California, June.
- Wellinghoff, Jon and David M. Morenoff (2007). "Recognizing the importance of demand response: The second half of the wholesale electric market equation," *Energy Law Journal*, Volume 28, No. 2.
- Williamson, O.E. (1966). "Peak-load pricing and optimal capacity under indivisibility constraints," *The American Economic Review* 56 (4):810–827.
- Wolak, Frank A. (2006). "Residential Customer Response to Real-Time Pricing: The Anaheim Critical-Peak Pricing Experiment," available from http://www.stanford.edu/~wolak.
- Wolak, Frank A. (2007). "Managing Demand-Side Economic and Political Constraints on Electricity Industry Re-structuring Processes," available from http://www.stanford.edu/~wolak.
- Wolak, Frank (2010). "An Experimental Comparison of Critical Peak and Hourly Pricing: The PowerCentsDC Program," Paper for 2010 POWER Conference, March 13.
- Wolak, Frank A. (2011). "Do Residential Customers Respond to Hourly Prices: Evidence from a Dynamic Pricing Experiment." *American Economic Review*: Papers and Proceedings, 101:3, 83-87.

 http://www.stanford.edu/group/fwolak/cgibin/sites/default/files/files/hourly_pricing_aer_paper.pdf.
- Wood, Lisa and Ahmad Faruqui (2010). "Dynamic Pricing and Low-Income Customers: Correcting misconceptions about load-management programs," *Public Utilities Fortnightly*, November, pp. 60-64. http://www.fortnightly.com/archive/puf archive 1110.cfm
- Xu, Peng et al. (2004). "Peak Demand Reduction from Pre-Cooling with a Zone Temperature Reset in an Office Building," report LBNL-55800, August.