

# IPU BIBLIOGRAPHY

MICHIGAN STATE UNIVERSITY ■ INSTITUTE OF PUBLIC UTILITIES REGULATORY RESEARCH AND EDUCATION

## RESTRUCTURING AND ELECTRICITY RATES

JANUARY 2013 ■ [ipu.msu.edu](http://ipu.msu.edu)

- Al-Sunaidy, A., and Green, R. (2006). Electricity deregulation in OECD (Organization for Economic Cooperation and Development) countries," *Energy*, 31(6-7), 769-787. [\[link\]](#)

Abstract: "This paper discusses the spread of electricity deregulation in OECD countries since the early 1990s. England, Wales and Norway were the pioneers, but almost all OECD countries have now introduced some degree of liberalisation, and several have free entry to generation while allowing all electricity consumers to choose where they buy their power. The paper discusses some of the issues raised by competition in generation and in retailing (or supply), and the need to have appropriate regulation for the transmission and distribution systems, which will continue to be monopolies."

- Apt, J. (2005). Competition has not lowered U.S. industrial electricity prices. *The Electricity Journal*, 18(2), 52-61. [\[link\]](#)

Abstract: "Previous studies have shown that significant price reductions resulted from deregulation in airlines, trucking, railroads, and natural gas. Retail electricity price data from 1990 through 2003 show no such benefit to industrial customers."

- Blumsack, S., Apt, J., and Lave, L. B. (2006). Lessons from the Failure of U.S. Electricity Restructuring. *The Electricity Journal*, 19(2), 15-32. [\[link\]](#)

Abstract: "Blind faith is unlikely to produce a free market that is competitive. Substituting markets for traditional regulation is only one choice among many policy instruments to achieve a goal of lower prices; such substitution should not be in itself a goal."

- Brennan, T. J. (2010). Decoupling in Electric Utilities. *Journal of Regulatory Economics*, 38(1), 49-69. [\[link\]](#)

Abstract: "Distributing electricity to users has been covered through the charge per kilowatt-hour for electricity used. Conservation advocates have promoted policies that "decouple" distribution revenues or profits from the amount of electricity delivered, claiming that usage-based pricing leads utilities to encourage use and discourage conservation. Because decoupling separates profits from conduct, it runs against the dominant finding in regulatory economics in the last 20 years-that incentive-based regulation outperforms rate-of-return profit guarantees. Even if distribution costs are independent of use, some usage charges can be efficient. Price-cap regulation may distort incentives to inform consumers about

energy efficiency-getting more performance from less electricity. Utilities will subsidize efficiency investments, but only when prices are too low. If consumers fail to adopt energy efficiency measures that would be individually beneficial, decoupling can increase welfare, but only if all energy revenues are separated from use, not just those associated with distribution."

- Bushnell, J., and Mansur, E., (2005). Consumption under noisy price signals: A study of electricity retail deregulation in San Diego. *The Journal of Industrial Economics*, 53(4), 493-513. [\[link\]](#)

Abstract: "Utility services employ nonlinear tariffs that attempt to convey information on cost convexities. This paper examines how customers respond to noisy and volatile tariffs by measuring deregulated retail rates' impact on electricity consumption in San Diego. When rates doubled in 2000, consumers appear to have reacted more to recent past bills than to current price information. By summer's end, we find consumption fell 6% while lagging price increases. Even months after the utility restored low historic rates customers continued curtailing demand. We conclude that rate structures relying upon lagged wholesale price averages produce delayed responses to scarcities or high costs."

- Caplan, E., and Brobeck, S., (2012). Have Restructured Wholesale Electricity Markets Benefitted Consumers? *Electricity Policy*. [\[link\]](#)

Abstract: "The evidence is clear that generators are profiting excessively from RTO power markets, and that sellers' rates are not 'just and reasonable' as the law requires. Consumers are paying the price, to their detriment and that of the overall economy."

- Costello, K. (2003). The Shocking Truth about Restructuring of the US Electricity Industry." *The Electricity Journal*, 16(5), 11-19. [\[link\]](#)

Abstract: "The author, early on a strong supporter of restructuring, now seriously questions whether at this time we are capable of doing it right on account of the highly divergent visions of the electricity industry held by major stakeholders. This revelation is akin to converting from being a Christian Fundamentalist to a Unitarian, who looks at most things not in black-and-white terms but in shades of gray."

- Hosoe, N. (2006). Deregulation of Japan's electricity industry. *Japan and the World Economy*, 18(2), 230-246. [\[link\]](#)

Abstract: "Japan's electricity industry is now in the process of regulatory reform. This industry consists of three sectors: generation, transmission, and distribution. The reform phases out the entry barrier in the first sector, while keeping the latter two as they were with a rate-of-return (ROR) regulation. To simulate this regulatory reform, we employ a computable general equilibrium model, which distinguishes these three sectors and is equipped with the ROR regulation and substitution among various energy sources. Our numerical simulations show a potential for significant welfare improvements and substitution among energy inputs even if the reform scope is limited."

- King, M., King, K., and Rosenzweig, M. (2007). Customer Sovereignty: Why Customer Choice Trumps Administrative Capacity Mechanisms. *The Electricity Journal*, 20(1), 38-52. [\[link\]](#)

Abstract: "In a functioning market, price performs a central role of rationing existing capacity to those who value it most and signaling the need for capacity investment. Together, price signals and demand response restrain price spikes when the system is under stress, reducing the political impulse to intervene with measures that erode incentives for capacity investment that would mitigate price excursions."

- Lave, L. B., Apt, J., and Blumsack, S. (2004). Rethinking Electricity Deregulation. *The Electricity Journal*, 17(8), 11-26. [\[link\]](#)

Abstract: "Proponents of free markets for electricity assert that minor fixes to the California market and to FERC's proposed Standard Market Design would generate lower prices. We disagree. Designing a competitive market that remedies the problems seen in California and other restructured markets is difficult; emulating even good ISOs like PJM will not do the job. Each one of the problems can be overcome, but the costs of doing so might make full deregulation unattractive."

- Littlechild, S. (2006). Competition and contracts in the Nordic residential electricity markets. *Utilities Policy*, 14(3), 135-147. [\[link\]](#)

Abstract: "The main Nordic residential electricity markets (Norway, Sweden and Finland) effectively opened to retail competition around 1998. They have not been subject to regulatory controls on prices or other contract terms. Competition is developing well. Between 11% and 32% of residential customers have switched to other suppliers, and a further 19% or more have chosen new terms with their local supplier. Terms available include fixed-price contracts ranging from 3 months to 5 years duration and spot price-related terms, in addition to the standard variable tariffs. The use of these new products is increasing over time, and there is considerable product innovation. This raises questions about the ability of regulation to substitute for retail competition."

- Marcus, W. B. (2011). Does Deregulation Raise Electric Rates? A Cross Sectional Analysis. *JBS Energy*. [\[link\]](#)

Introduction: "The theory behind deregulation is that competition would be salutary and would create greater efficiencies and reduce costs. A number of economists and a larger number of deregulation proponents have advanced this view... However, a large number of reasons can be identified as to why costs have not necessarily gone down as originally expected, including but not limited to markets' raising costs of generation to marginal cost; strategic bidding (the extremes of which were developed by Enron, as outlined in Woychik, 2007 and McCullough 2002); costs of hedging generation for sales to retail customers; and "de-integration" that reduces economies of scale and increases costs (Kwoka, 2006). De-integration cost increases arise from (1) separating generation from other utility activities, (2) shifting of transmission from state to federal jurisdiction and more generous regulation at FERC; (3) increased administrative costs arising from Regional Transmission Organizations (which duplicate utility functions); (4) costs of building and administering new computer systems for both utilities and RTOs to handle

system requirements caused by deregulation (direct access billing requirements, load settlement, RTO bidding" requirements, etc.). Finally, costs arise from separating retail services from wires in places with full competition (such as Alberta and Texas), including even assuring a rate of return for retail services in Alberta to create room for other competitors. (Alberta Utilities Commission, 2006)"

- Morey, M., and Kirsch, L. (2006). Retail Rate Impacts of State and Federal Electric Utility Policies. *The Electricity Journal*, 26(3), 35-49. [\[link\]](#)

Abstract: "Most states that pursued restructuring hoped that it would encourage competition and other efficiencies that would reduce their relatively high rates. An analysis finds that retail access has provided such a rate reduction for residential customers, though this reduction has been relatively small in states that adopted RPS. Retail access has had no significant impact on commercial and industrial rates in states without RPS, but has significantly raised these rates in states with RPS."

- Nakajima, T., and Hamori, S. (2010). Change in consumer sensitivity to electricity prices in response to retail deregulation: A panel empirical analysis of the residential demand for electricity in the United States. *Energy Policy*, 38(5), 2470-2476. [\[link\]](#)

Abstract: "About ten years have passed since the deregulation of the U.S. retail electricity market, and it is now generally accepted that the available data is adequate to quantitatively assess and compare conditions before and after deregulation. This study, therefore, estimates the changes in price elasticity in the residential electricity market to examine the changes, if any, in household sensitivity (as a result of retail electricity market deregulation policies) to residential electricity rates. Specifically, six types of panel data are prepared, based on three cross-sections—all states (except for Alaska and Hawaii) and the District of Columbia, deregulated states, and non-deregulated states—and two time series—the period before deregulation and the period after deregulation. The panel empirical analysis techniques are used to determine whether or not the variables are stationary, and to estimate price elasticity. We find that there is no substantial difference in the price elasticity between deregulated and non-deregulated states for both periods—before deregulation and after deregulation. Thus, it can be said that the deregulation of the retail electricity market has not made consumers more sensitive to electricity rates and that retail deregulation policies are not the cause of price elasticity differences between deregulated and non-deregulated states."

- Rose, K. (2012). State Retail Electricity Markets: How Are they Performing So Far?. *Electricity Policy*. [\[link\]](#)

Abstract: "States that restructured their electricity market to separate power generation from other retail services did so in part to create competition and bring their generally higher power prices down. The move has not produced the desired result."

- Salies, E., and Price, C.W. (2004). Charges, Costs and Market Power: the Deregulated UK Electricity Retail Market. *The Energy Journal*, 25(3). [\[link\]](#)

Abstract: "The residential UK electricity market was opened for the first time in 1999, introducing choice of supplier, and about 40 percent of households changed supplier in the first four years. After three years price caps were removed. We review this process and assess the competitiveness of the market by examining how the charges levied by suppliers depend on cost and demand factors for three different payment methods and consumption levels. We also identify signs of additional market power of incumbency and the effect of levying a tariff with no fixed charge. We find that both cost and demand factors affect charges, and the relationship varies for different payment methods and consumption levels; and that tariffs with no fixed element have different effects for different payment methods. We also conclude that considerable market power seems to remain with potentially adverse distributional effect."

- Slocum, T. (2001). Electric Utility Deregulation and the Myths of the Energy Crisis. *Bulletin of Science Technology & Society*, 21(6), 473-481. [\[link\]](#)

Abstract: "Electricity deregulation was meant to improve the quality of people's lives by lowering the cost of a critical commodity. In every state that has chosen deregulation, however, power companies, free from the oversight of state regulators, have increased prices and, in California's case, have driven a utility to bankruptcy. It is clear that deregulation was intended to benefit the energy industry more than consumers by removing cost-based regulations that restricted corporate profits but guaranteed low prices and reliable service to consumers. Deregulation proponents argued that California's commitment to strong air quality standards prevented development of adequate power plant construction and that not a single power plant was constructed in California in the 1990s. This claim is refuted through an examination of California Energy Commission data. Although other states' experiences are not as dramatic as California's, serious problems will emerge if deregulation continues to dominate the policy agenda."

- Spees, K., and Lave, L. B. (2007). Demand Response and Electricity Market Efficiency. *The Electricity Journal*, 20(3), 69-85. [\[link\]](#)

Abstract: "Customer response is a neglected way of solving electricity industry problems. Historically, providers have focused on supply, assuming that consumers are unwilling or unable to modify their consumption. Contrary to these expectations, customers respond to higher prices that they expect to continue by purchasing more efficient appliances and taking other efficiency measures, a review of published studies indicates."

- Swadley, A. and Yucel, M. (2011). Did residential electricity rates fall after retail competition? A dynamic panel analysis. *Energy Policy*, 39(12), 7702-7711. [\[link\]](#)

Abstract: "A key selling point for the restructuring of electricity markets was the promise of lower prices. There is not much consensus in earlier studies on the effects of electricity deregulation in the U.S., particularly for residential customers. Part of the reason for not finding a consistent link with deregulation and lower prices was that the removal of transitional price caps led to higher prices. In addition, the timing of the removal of price caps coincided with rising fuel prices, which were passed on to consumers in a competitive market. Using a dynamic panel model, we analyze the effect of participation rates, fuel costs, market size, a rate cap and switch to competition for 16 states and the District of Columbia. We find that

an increase in participation rates, price controls, a larger market, and high shares of hydro in electricity generation lower retail prices, while increases in natural gas and coal prices increase rates. We also find that retail competition makes the market more efficient by lowering the markup of retail prices over wholesale costs. The effects of a competitive retail electricity market are mixed across states, but generally appear to lower prices in states with high participation rates."

☐ Woo, C. K., King, M., and Chow, L. C. H. (2006). Costs of Electricity Deregulation. *Energy*, 31(6-7), 747-768. [\[link\]](#)

Abstract: "The last decade has witnessed efforts throughout the world to deregulate the electricity industry, with varied results. While there have been a few qualified success stories, many challenges of deregulation have come to light. These challenges can lead to negative, even disastrous, outcomes. Based on a comprehensive literature review, this paper catalogues problems experienced in various deregulation efforts, and considers the application of the lessons learned from this history to Israel, which is considering deregulation. Failings of deregulation are found to center around the following problems: high set-up cost; complicated market design; inevitable spot price volatility; market power abuse; inefficient investment; difficulty in reducing generation cost; dysfunctional input markets; stranded cost; unequal distribution of benefits. We find that many of these problems are exacerbated by the particular circumstances faced by Israel, and advise any country or region considering deregulation to carefully consider these obstacles to success."

☐ Zarnikau, J., and Whitworth, D. (2006). Has electric utility restructuring led to lower electricity prices for residential customers in Texas? *Energy Policy*, 34(15), 2191-2200. [\[link\]](#)

Abstract: "This paper analyzes the determination of residential electricity prices in the competitive Electric Reliability Council of Texas (ERCOT) market. This analysis suggests that electricity restructuring in Texas has not yet resulted in lower prices for the majority of residential energy consumers in areas open to competition. Contrary to common expectations, residential electricity costs for consumers at a typical (1000 kWh per month) consumption level have increased at a greater rate in the areas of Texas offering retail choice than in the areas of the State where retail competition has not been introduced."