

THE EVOLUTION OF A COMPETITIVE ELECTRICITY MARKET IN TEXAS

Jay Zarnikau, PhD

Frontier Associates LLC

1515 S. Capital of Texas Hwy, Suite 110

Austin, Texas, USA 78746

jayz@frontierassoc.com

1. Overview

The Electric Reliability Council of Texas (ERCOT) market is generally considered to be the most successful of the restructured retail electricity markets in North America. Customer switching rates are relatively high. Reliability has been maintained. The degree of competition in the retail sector is impressive. Many of the problems that plagued the California market have been avoided.

Restructuring has achieved many policy goals. Competition has been enhanced in many segments of the market. Consumers of electricity now enjoy new choices of suppliers and services. Many industrial energy consumers appear to be enjoying lower prices for power.

However, some policy goals remain elusive. In an era of high natural gas prices, smaller electricity consumers in the competitive areas of Texas face much higher electricity prices than their neighbors in areas that have not opened to retail competition. The wholesale market will soon be further restructured as a centrally-dispatched nodal market to better address transmission congestion problems.

This paper provides an updated examination of the effects that Texas' restructuring plan has had on electric rates and the degree of competition in various segments of the market in the years since competition was introduced. A number of *lessons learned* are presented.

2. Methods

Key steps in the establishment of the competitive ERCOT market are reviewed.

In order to examine the degree of competition in the ERCOT market, the numbers of suppliers in various segments of the market are reviewed. The concentration of suppliers in certain segments of the market is discussed. Customer switching rates and other metrics are reviewed to discern the degree of competition in retail sales of electricity.

Trends and levels in the price of electricity in areas of the State where competition has been introduced are compared to prices in areas where competition has not yet been launched. Comparisons for residential prices rely upon data collected by the Public Utility Commission of Texas, while comparisons of prices for commercial energy consumers are based upon a large database of prices quoted by competitive retail electric providers. Simple econometric models are presented to explain commercial electric rates and to analyze how retail prices were affected by the gradual removal of retail price caps.

A variety of current policy issues will be described, including resource adequacy, the transition to a nodal wholesale market structure, efforts to foster demand response, and the integration of greater amounts of wind power into the market.

3. Results

In comparison to many other U.S. states, Texas has indeed been relatively successful in introducing competition into the retail level of the market. Maintaining a workably competitive

wholesale market remains a challenge, but Texas is taking a number of positive steps to mitigate market power as it transitions toward a nodal market structure.

At least for smaller consumers of electricity, electricity prices have increased more rapidly in areas of the State where competition has been introduced than in other areas. This is the result of a variety of factors, including a divergence between the price of natural gas (which is typically the marginal fuel for generation and sets the market clearing price of energy in the competitive wholesale market) and the prices of other fuels (which have the effect of moderating price fluctuations in the fuel factors of regulated utilities and public power entities which set generation prices based on average overall fuel costs). Further the higher transaction and marketing costs associated with serving small energy consumers in a competitive retail market may place some upward pressure upon electricity prices.

Removal of retail price caps appears to have actually led to a reduction in retail market prices.

4. Conclusions

It is hoped that the many lessons learned from Texas' relatively successful experience with restructuring will shape restructuring initiatives in other markets.

References

- Adib, Parviz, and Jay Zarnikau, Texas (2006). The Most Robust Competitive Market in North America, in *International Experience in Restructured Electricity Markets: What works, what does not, and why*, Ed. Fereidoon P. Sioshansi and Wolfgang Pfaffenberger, Elsevier, 2006.
- Kang, Linhong and Jay Zarnikau (2008). "How the Expiration of Retail Price Caps Affected Competitive Electricity Prices in Texas," unpublished manuscript.
- Zarnikau, Jay, (2005) "A Review of Efforts to Restructure Texas' Electricity Market," *Energy Policy*. **33** pp, 15-25.
- Zarnikau, Jay and Doug Whitworth (2005), "Has Electric Utility Restructuring Led to Lower Electricity Prices for Residential Consumers in Texas?," *Energy Policy*.
- Zarnikau, Jay, Paul Smolen and Marilyn Fox (2007). "Trends in Prices to Commercial Energy Consumers in the Competitive Texas Electricity Market." *Energy Policy*.
- Zarnikau, Jay (2008). "The Quest for Competitive Electricity Markets," *LBJ Journal of Public Affairs*.