

Prices, Reliability, and Consumer Choice in the Texas Electricity Market

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Key Points

- Federal government data make poor proxies for past and current prices in Texas' competitive area.
- Federal data show Texas above average nationally both pre- and post-restructuring; actual prices show Texas moving from above to below average.
- Average competitive prices (11.1 cents per kWh) today are 9.46% below average 2001 regulated prices; the lowest average price (8.52) is 30.51% lower.
- Most New Yorkers (19.17), Californians (14.08), and Floridians (12.31) pay higher prices than Texans; Texas prices are competitive with surrounding states.
- Texans can choose from 138 residential plans offered by 29 providers.
- Renewable energy subsidies and energy efficiency mandates could add \$2.65 billion annually to electricity bills by 2020.

It has been fourteen years since Texas began restructuring its electricity market to foster wholesale competition, eight years since competition was introduced into the retail market, and three years since retail electricity price controls were eliminated. The restructuring continues, with the next major step of implementing a nodal transmission market.

That Texas is still moving forward make us unique among the 50 states. Lynne Kiesling and Andrew Kleit put the Texas experience in context:

Since the California escapade [of 2000-1], several states have moved backward with electricity restructuring, and no state has moved forward. No state, that is, except Texas. ... Texas, alone among the U.S. states, [has] moved forward into a truly restructured and competitive electricity era.¹

While restructuring has not always gone smoothly and has generated much debate, the problems—high natural gas prices, special interests, and intense media scrutiny—that in other states stopped restructuring in its tracks did not stop Texas.

Why this is could be debated, though three key elements stand out: leadership by policymakers, a marketplace designed to let market participants compete, and the Price to Beat. However we got here, though, Texas is now moving forward into the frontier of electricity markets with very little company.

Yet not everyone believes this is the journey Texas should be taking. As one critic says, “The ultimate problem [with deregulation] is that the market is designed to maximize profits for the power companies, and it’s costing consumers more money.”²

Of course, the Texas electricity market is not deregulated. Even within the Electric Reliability Council of Texas (ERCOT) competitive region there are extensive regulations, including wholesale price caps and traditional rate regulation on transmission and distribution utilities.

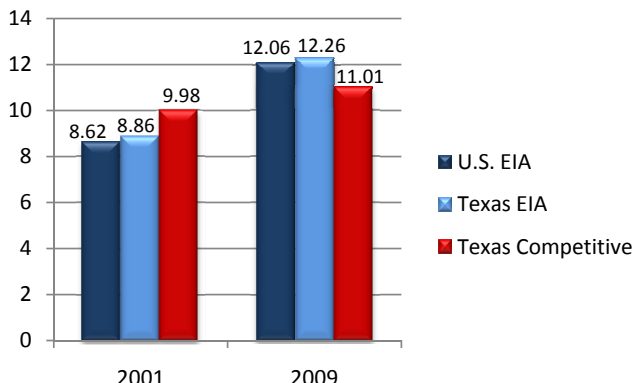
Still, the question remains, are Texans better or worse off today than before restructuring?

Three factors that need to be examined to answer this question: prices, reliability, and consumer choice. This paper examines all three. It will also examine the growing trend of forcing consumers to bear significant costs through added fees and taxes on their electricity bills.

Electricity Prices

U.S. Energy Information Administration (EIA) price data are commonly used to measure the effectiveness of the restructuring of Texas' electricity market. However, an examination of actual residential market prices shows that the EIA data make poor proxies for prices in Texas' competitive markets. Because of this, relying on EIA price data significantly understates the drop in Texas residential prices under competition; prices are generally lower today than in 2001, the last year of regulated prices in ERCOT.

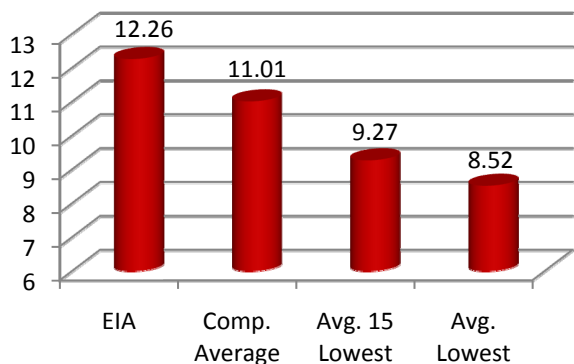
Texas Residential Electricity per kWh Prices Pre- and Post-Restructuring, Unadjusted for Inflation



Source: Energy Information Administration and Powertochoose.com

EIA data do not accurately portray past and current prices in Texas’ competitive area. Though EIA data show Texas’ 2001 prices slightly above the national average, regulated prices in ERCOT’s competitive regions were significantly higher. For 2009, EIA data still show Texas above average nationally, but average competitive prices are below average. What accounts for the differences? First, EIA data include non-competitive prices charged by non-ERCOT utilities, electric cooperatives, and municipally-owned utilities. Second, cooperative and municipal prices have increased relative to prices in competitive areas. Third, the EIA can no longer rely on getting comprehensive price data from regulators in Texas as it can in most other states.

Comparison of Reported vs. Actual Texas Residential Electricity Prices per kWh, 2009



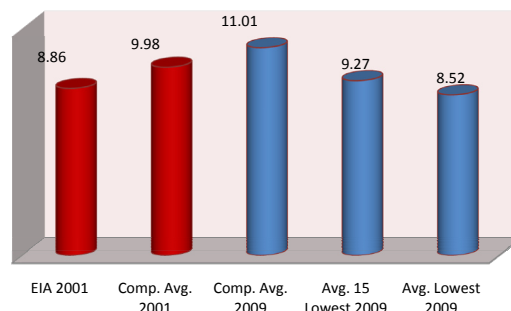
Source: Energy Information Administration and Powertochoose.com

Even so, EIA data provide a fairly positive review of electricity restructuring in Texas. But competitive price data paints an even better picture. For instance, 2001 regulated rates in Texas’ competitive areas (9.98 cents per kWh) averaged 15.8 percent above the national average. Today, however, the average competitive price (11.01 cents per kWh) is 8.71 per cent *below* the national average, while the average of the 15 lowest offers (9.27 cent per kWh) is 23.13 percent below the national average.*

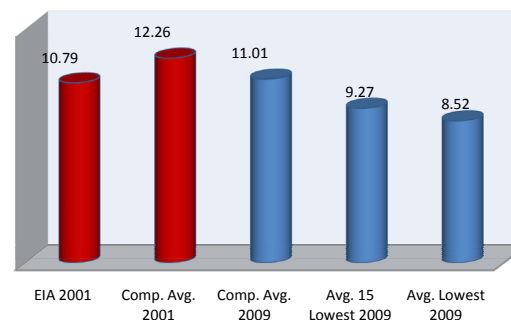
More good news for Texas consumers is that competitive prices have fallen not only relative to national prices, but are on average lower in real terms than regulated prices in Texas in 2001 (see charts below). Adjusted for inflation, the average competitive price today is 9.46 percent below the average 2001 regulated price; the average of the 15 lowest prices is 24.39 percent lower; and the lowest average price is 30.5 percent lower. Even without adjusting for inflation, however, most Texans can easily buy electricity today below 2001 regulated prices.

Texas Residential Electricity Prices per kWh

Unadjusted for Inflation



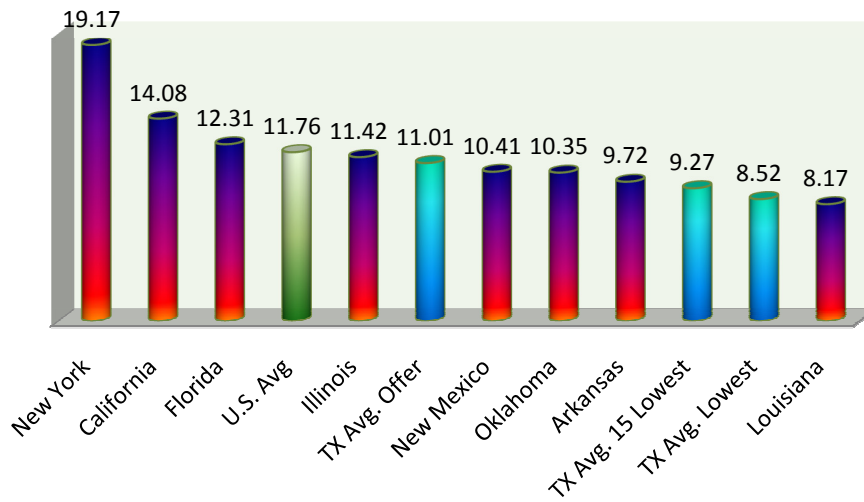
Adjusted for Inflation, 2009 dollars



Source: Energy Information Administration and Powertochoose.com

* Texas competitive prices are as of December 2009. EIA prices are as of October 2009.

Texas vs. U.S. Residential Electricity Prices per kWh, 2009

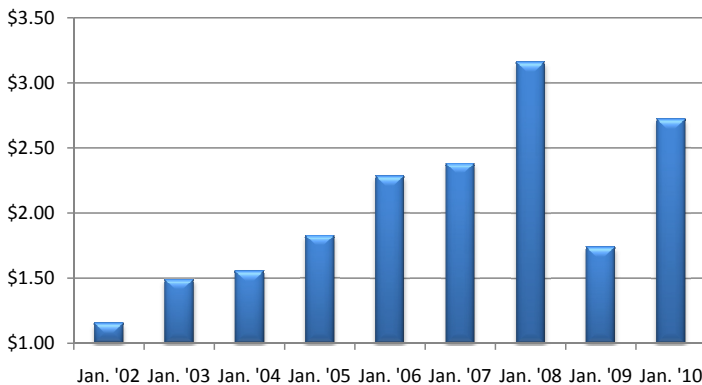


Source: Energy Information Administration and Powertochoose.com

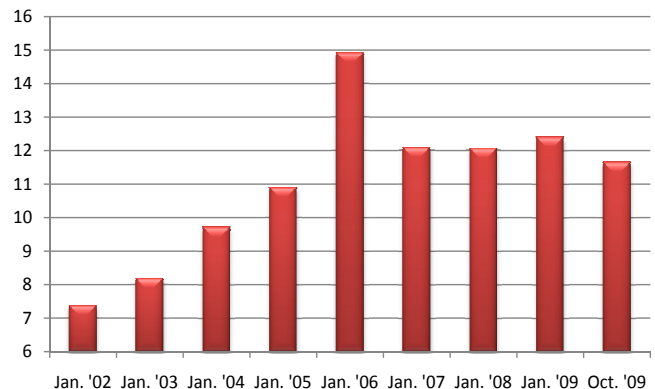
Additionally, actual Texas prices fare quite well against our neighboring states' prices, despite recent reports.³ The average price of the 15 lowest offers in Texas is lower than the average price in New Mexico, Oklahoma, and Arkansas, and the average lowest price is close to the average price even in low-cost Louisiana. Further, Texas prices are lower—significantly in many cases—than the average price in the other four of the five largest states. Perhaps the lower price of electricity in Texas is one reason it has recently moved past New York and California as the home to the most Fortune 500 companies.

While there are several ways to look at the data, it is clear that electricity prices have decreased in Texas since competition was introduced. The decline is remarkable when compared to increases in other consumer energy prices such as gasoline and natural gas—especially since natural gas is often claimed to drive electricity prices in Texas.

Retail Gasoline Prices, 2002-10



Residential Natural Gas Prices, 2002-09



Source: Energy Information Administration

Reliability

Earlier this month, Florida experienced unseasonably cold weather, with temperatures dipping into the teens in places. This resulted in a record-setting demand for electricity that sent the Florida system into shock. Customers in various areas throughout the state struggled with power outages lasting from a few hours to most of the day.

To cope with the ongoing cold, Florida Power & Light Co. implemented its voluntary load-management program for some customers on Florida’s east coast, meaning many customers had to go without electricity for a time. For instance, classes scheduled to start before 11 a.m. at all Brevard Community College campuses and University of Central Florida satellite campuses in Cocoa and Palm Bay were canceled. Consumers were also asked to set their thermostats at 68 degrees and check their filters to increase energy efficiency.⁴

Venezuela has had even more problems. It experienced rolling blackouts throughout the country in January. Venezuelan President Hugo Chavez said he is “going to continue to apply a rigorous energy saving plan” to address the problem.⁵ Similarly, New York and California have experienced significant power shortages within the last decade.

Texans have experienced only two problems with reliability in recent years. In 2006, an unexpected April heat wave caught Texas with 14,000 megawatts offline for scheduled maintenance.

Peak demand reached an all-time April high of 51,714 megawatts—2,500 megawatts higher than forecasted. Overall capacity, however, was not a problem. Additional units were brought back online and service was restored quickly. The other problem occurred on February 26, 2008, when the wind in West Texas suddenly stopped blowing. Over the 40-minute period preceding the start of load curtailment, wind generation declined by 80 megawatts relative to its schedule. This led to minimal disruptions and, in any event, was caused not by capacity issues but by the unreliability of wind.

The reliability of the Texas system is due in large part to Texas’ ample reserve margins. ERCOT sets a target of a 12.5 percent reserve margin over expected summer peak capacity. Last summer, Texas had a reserve margin of about 16.8 percent. ERCOT projects that Texas will have reserve margins of 21.8 percent, 19.9 percent, and 18.1 percent over the next three years, respectively.

Texas’ impressive reserve margins—and thus increased reliability—are a direct result of its competitive energy-only market.* One indication of this is that Texas’ reserve margins are almost always higher than originally forecasted. For instance, the table below shows that 2009 reserves were forecasted in 2007 to be only 10.1 percent, well below the actual figure of 16.8 percent. It is only as the actual date gets closer that the forecast approaches the actual target. The same phenomenon is holding true for 2010 and 2011.

ERCOT Reserve Margin Projections

	2009	2010	2011	2012	2013	2014	2015
May 2007	10.1%	8.3%	6.7%	5.9%	n/a	n/a	n/a
Dec. 2007	12.1%	14.0%	11.2%	10.5%	8.2%	n/a	n/a
May 2008	16.5%	17.3%	15.0%	14.5%	12.3%	n/a	n/a
Dec. 2008	15.8%	21.2%	18.7%	17.8%	17.9%	15.8%	n/a
May 2009	16.8%	20.1%	18.8%	17.0%	16.3%	13.9%	n/a
Dec. 2009	n/a	21.8%	19.9%	18.1%	14.7%	12.3%	10.2%

Source: 2009 Report on the Capacity, Demand, and Reserves in the ERCOT Region, ERCOT

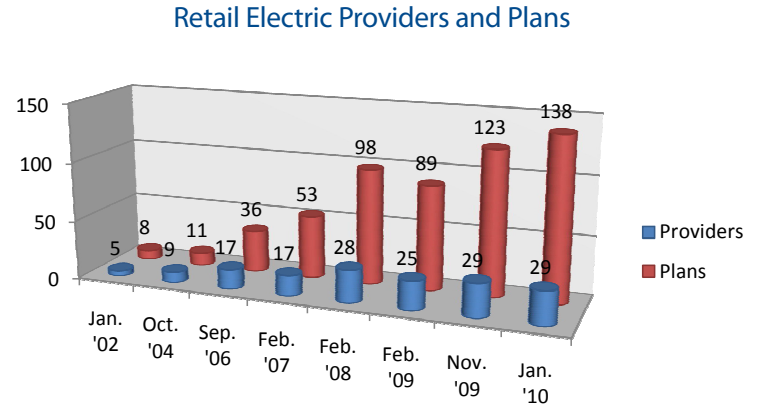
* Texas’ previous rate of return market was one where regulators determined the desired generation for the market, approved the construction of new generation, and determined what consumers would pay for that generation by providing the utility with a guaranteed rate of return. In other words, most of the risk for the need and cost of the generation was borne by ratepayers. Texas operates an energy-only market today. Texas can do this where other states can’t because it relies on price signals to tell investors when new generation is needed, and only Texas has sufficient competition to let an energy-only market operate efficiently. Though the electricity market structure still does not transmit signals perfectly, the energy-only market has operated well enough to provide Texas with ample reserve margins while shifting the risks of over-construction from consumers to investors.

What explains the ample reserve margins and the poor initial projections? A big part is Texas' restructured energy-only market. Unlike Texas' previous market structure where generators had to get permission to build new generation facilities, in Texas, generators build facilities when they believe they can turn a profit. The lack of state pre-approval means that ERCOT may not know what facilities will be on-line as far out as they would in a more regulated market. The profit incentive has led to an investment of over \$25 billion in 39,000 MW of new generation since 1996⁶ and ensured that investors—not consumers—take the risk that all of this electricity can be sold. In rate-based markets, the cost of the new generation is added into the rate base and paid for by consumers whether they need it or not.

Consumer Choice

The final indicator of whether restructuring is working is the consumer choice in the Texas electricity market, which is a good way to determine competitiveness in the market. The investment in generation seen in the previous section shows the competitiveness of the wholesale market. However, competition is also strong in the retail market. The average Texan in ERCOT can choose from 138 different plans offered by 29 different providers. This is up from five providers offering eight plans in 2002.

Additionally, almost 82 percent of consumers have actively chosen competitive rate plans, while the other 18 percent have benefitted from competition through lowered rates on old plans or getting competitive rates through move-ins.



Source: Powertochoose.com

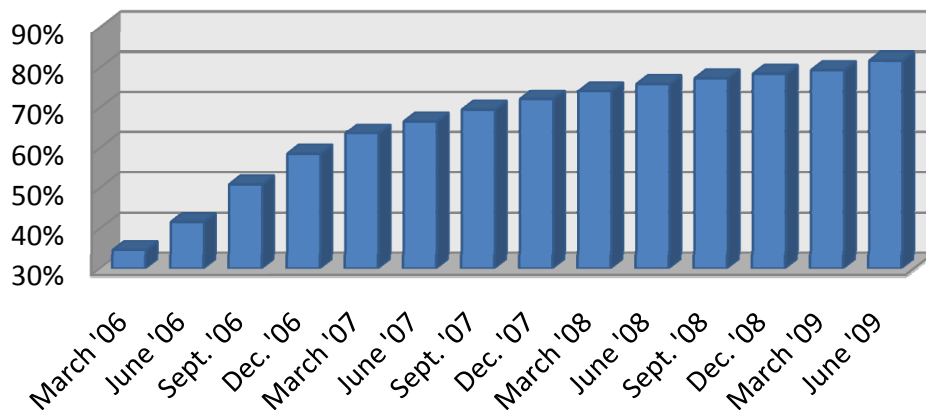
Almost everyone is participating in Texas' highly competitive electricity market.

Increasing Consumer Costs

One thing restructuring hasn't done is to decrease the tendency of government to place charges on electric bills that make electricity more expensive for consumers.

Historically, state and local governments have used regulated monopolies such as electricity, telecommunications, and natural gas companies as revenue collectors. Electricity franchise fees are one example, which today generate over \$250 million annually for local governments.⁷ While these fees began long before restructuring, several new charges have been added since then.

Consumer Choice and Participation



Source: Bret J. Slocum, "Second Quarter Data Concerning Customers Exercising Choice," letter to the Public Utility Commission of Texas (Aug. 5, 2009)

Renewable energy subsidies and energy efficiency mandates now cost consumers far more than franchise fees. For instance, subsidies for Texas wind energy through the federal Production Tax Credit should cost taxpayers about \$300 million in 2010—though this is a tax subsidy, not an add-on to the electric bill.⁸ The cost of wind Renewable Energy Credits—about \$41 million this year—are passed on to consumers through the cost of electricity.⁹ Finally, Competitive Renewable Energy Zone transmission lines—being built to transmit electricity from wind in West Texas—will add as much as \$1.3 billion annually to electricity bills once the lines have been completed.¹⁰ The extra annual cost to consumers and taxpayers for wind energy should reach \$2 billion by 2020.¹¹

Last session multiple bills were filed to further increase these costs. The bills focused on increased subsidies for renewable energy—especially solar and biomass—and for energy efficiency. None of the legislation passed. But it is certain attempts will be made to pass them again in 2011.

The costs of the bills varied. Though the bills that had the most support cost less, proposed solar subsidies ran as high as \$220 million annually, while the price tag for energy efficiency mandates reached up to \$426 million per year.¹²

Add all these up, and the annual cost for these energy subsidies could run as high as \$3 billion per year, most of it being paid for by Texas electricity customers.

Conclusion

The evidence clearly points to the conclusion that Texas' restructuring of its electricity market has led to lower consumer prices, greater reliability, and highly competitive markets. It is worth noting, however, that the critics of restructuring—who oppose it because they (mistakenly) claim it has increased prices—are usually the same ones who seek to force higher prices on consumers through renewable energy subsidies and energy efficiency mandates.

Because of concern over high electricity prices in 2007, the Texas Legislature came close—only a parliamentary technicality stopped it—to significantly increasing regulations on the market. Additionally, the Legislature has created the System Benefit Fund to help low-income Texans pay their electricity bills in the restructured market. Yet the same Legislature that wants low prices continues to increase electricity prices through energy subsidies and mandates. It is paradoxical that these higher costs are being made more palatable to the public by the lower electricity prices produced by restructuring.

Markets don't guarantee the lowest possible prices, but they do guarantee the best possible prices based on a customer's preference. Customers often prefer reliability, customer service, lack of volatility, and brands over the lowest possible price. Yet today, it appears that Texas consumers are getting all of those things and low prices as well. Only the government is keeping prices from getting even lower. ★

Endnotes

- ¹ Lynne Kiesling & Andrew Kleit, *Electricity Restructuring: The Texas Story*, AEI Press (Dec. 2009), p. 5.
- ² Tom “Smitty” Smith, “Texas’ retail electric rates significantly higher than neighboring states,” *Fort Worth Star-Telegram* (Dec. 12, 2009).
- ³ Ibid.
- ⁴ Orlando Sentinel, “Voluntary power reductions begin as demand surges” (Jan. 11, 2010).
- ⁵ RTT News, “Chavez Sacks Power Minister For Wrongly Implementing Rolling Blackouts” (Jan. 14, 2010).
- ⁶ ERCOT, ERCOT Quick Facts, 2009.
- ⁷ Calculations of the author based on a review of city budgets.
- ⁸ Bill Peacock, *The True Cost of Wind Energy*, Texas Public Policy Foundation (Oct. 2008).
- ⁹ Ibid.
- ¹⁰ Ibid.
- ¹¹ Ibid.
- ¹² Bill Peacock, “Texas’ New Energy Taxes,” Texas Public Policy Foundation (May 2009).

About the Author

Bill Peacock is the vice president of research and director of the Texas Public Policy Foundation's Center for Economic Freedom. He has been with the Foundation since February 2005.

Bill has extensive experience in Texas government and policy on a variety of issues including, economic and regulatory policy, natural resources, public finance, and public education. His work has focused on identifying and reducing the harmful effects of regulations on the economy, businesses, and consumers.

Prior to joining the Foundation, Bill served as the Deputy Commissioner for Coastal Resources for Commissioner Jerry Patterson at the Texas General Land Office. Before he worked at the GLO, Bill was a legislative and media consultant. He has also served as the Deputy Assistant Commissioner for Intergovernmental Affairs for then-Commissioner Rick Perry at the Texas Department of Agriculture and as a legislative aide to then-State Rep. John Culberson.

Bill has a B.A. in History from the University of Northern Colorado and a M.B.A. with an emphasis in public finance from the University of Houston.

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