

Commercial Electric Rates

Lessons for Ohio from Other Deregulated States

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Executive Summary

Highlights

Beginning in 1999, Ohio began transitioning from traditional cost-based regulation of electric generation service to a "market-based" one. States which have finished this process and proceeded to markets have seen rates skyrocket. Rate Stabilization Plans have allowed Ohio to continue in the market-based direction, while temporarily avoiding rate shock. These plans begin expiring at the end of 2008 for most Ohio electric utilities. If no action is taken by the PUCO and Ohio legislature, Ohio will be completely subjected to market prices.

We have collected data on electric rates for commercial customers of utilities in major cities of every state. In order to estimate what will happen to Ohio's commercial electric rates on January 1, 2009, we took a look at the experiences of 13 other deregulated states using four different electric profiles. Ohio can learn from what has happened to provider of last resort (POLR) prices, what alternative market offers are available to customers, and the rate of customer switching to these alternative market rates.

Key Conclusions

Based on our analysis, we conclude that the market-based approach has repeatedly produced unfavorable price outcomes relative to prices under regulation. We have found no data to support that even a single state has benefited from the effort to enable competition in the electric generation market.

Wherever rate caps have expired, high increases in incumbent utility POLR commercial electric rates follow. This has also been true for residential¹ and industrial² customers throughout the United States. In 2007, Ohio stakeholders must complete efforts to address the impending rate shock crisis. The underlying problems of the electric "markets" are problems that states alone can not fix. Until root causes are addressed at the federal level, entry into competitive markets by any state will be disastrous for commercial energy consumers. Ohio stakeholders (e.g., the Ohio legislature and PUCO) need to coordinate with policymakers on the federal level to produce outcomes that are in the best interest of our state.

- At the state level, the Ohio Legislature should give the Public Utility Commission more power to protect Ohio's economy and consumers.
- At the federal level, Ohio stakeholders need to actively pressure the Federal Energy Regulatory Commission (FERC) to complement Ohio's efforts to ensure that its citizens have access to reliable and reasonably priced electricity.

¹ See Residential Report on Deregulation, at www.brakeyconsulting.com, under "Reports".

² See Industrial Report on Deregulation, at www.brakeyconsulting.com, under "Reports".

Electric Deregulation

Background on Electric Deregulation

Traditionally, in a state regulated environment, vertically integrated electric utilities provided the generation, transmission and distribution of electric power to the customers in one package. Under deregulation³, these services are separated or “unbundled” into individually priced functions. While distribution (or delivery) continues to be regulated by the state, transmission authority and control resides in the federal government as does the authority regarding wholesale sales of electricity. Where states enacted electric restructuring legislation, customers gained the choice of purchasing generation from alternative suppliers or remaining with the distribution utility designated as the generation supply provider of last resort (POLR). When generation is no longer owned by the distribution utility, it may need to secure its POLR supply from the wholesale electric market subject to FERC’s ratemaking authority. The Federal Power Act requires FERC to ensure that wholesale prices are “just and reasonable”.

In a recent *New York Times* article, the reporter began by stating, “A decade after competition was introduced in their industries, long-distance phone rates had fallen by half, air fares by more than a fourth and trucking rates by a fourth. But a decade after the federal government opened the business of generating electricity to competition; the market has produced no such decline.”⁴

Electric Deregulation in Ohio

When Governor Taft signed Ohio’s electric restructuring legislation (“SB 3”) in 1999, he initiated a process which was expected to eventually lower electric costs within Ohio. Through SB 3, a timeline was created to transition Ohio into a competitive marketplace by January 1, 2006. The timeline was based on what proved to be a faulty assumption that a robust wholesale and retail market would be in place and fully functional.

As we entered 2003, based upon the results of both electric restructuring inside and outside of Ohio, it was apparent to the Public Utilities Commission of Ohio (PUCO) and other Ohio stakeholders that SB 3’s timeline assumption was overly optimistic. Federal policymakers had not yet created a “market” that was producing the price efficiencies that one would expect to see. Rather than lower prices and better service, customers in open market states were contending with rate shock and electric supply problems. Ohio’s answer was Rate Stabilization Plans (RSPs).

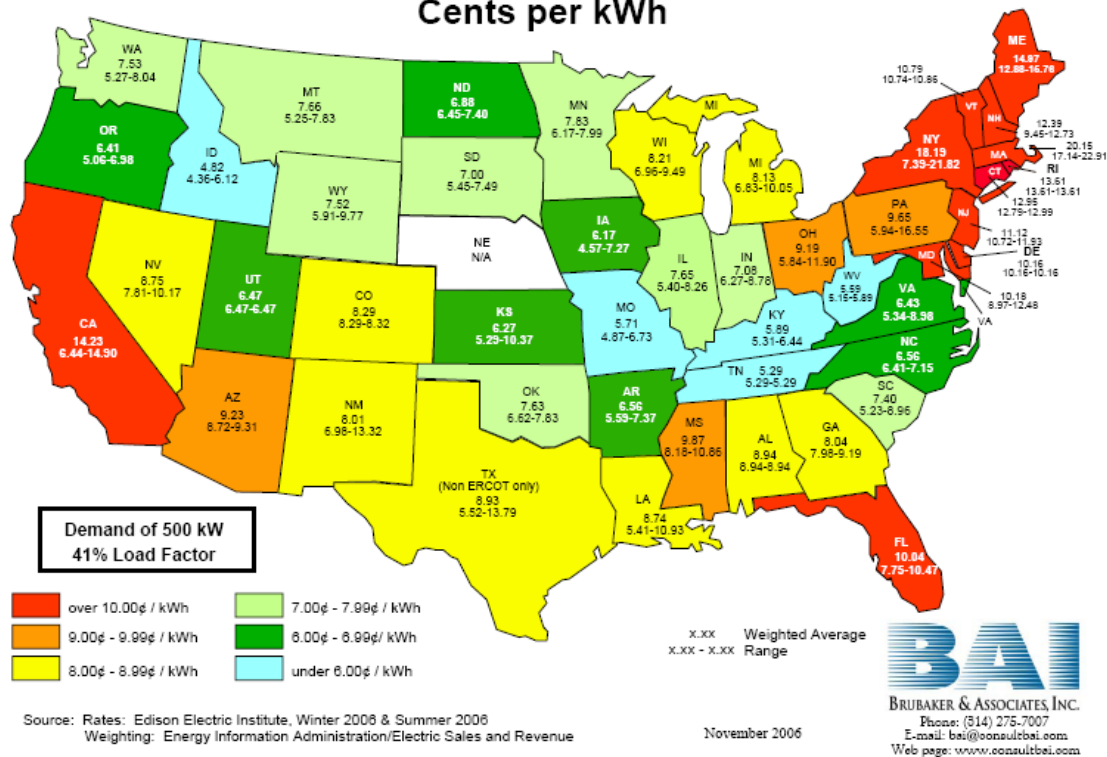
RSPs are structured arrangements with each of the Ohio investor-owned electric utilities that were proposed by the utilities and approved by the PUCO.⁵ These plans have allowed Ohio to continue to move to competitive markets without subjecting itself to rate shock. While the RSPs are providing Ohio an additional incubation period to allow the FERC and its regional transmission organizations (RTOs) more time to develop competitive markets, the RSPs will begin expiring at the end of 2008 for nearly all Ohio electric utilities. Unfortunately, the intrinsic problems of the wholesale markets have not been adequately addressed by FERC despite this allowance of more time and competition in the retail market depends on good

³ Deregulation is also referred to as restructuring, open markets, retail access or competition.

⁴ David Cay Johnston, “Competition Era Fails to Shrink Electric Bills”, *New York Times*, October 15, 2006.

⁵ The PUCO has held that it does not have authority to impose a rate stabilization plan on a utility.

Year 2006 Commercial Electricity Rates For Investor Owned Utilities Cents per kWh



The Electric Energy Market Competition Task Force⁸ has examined whether competition in wholesale electric markets has resulted in the kind of choice that is generally associated with competitive markets. In their 2006 draft report to Congress, they state:

“One of the main impediments to retail competition has been the lack of entry by alternative suppliers and marketers to serve retail customers. Most states required the distribution utility to offer customers electricity at a regulated price as a backstop or default if the customer did not choose an alternative electricity supplier or the chosen supplier went out of business – that is called ‘provider of last resort (POLR) service.’ Many of these states capped the POLR service price to ‘transitional’ multi-year periods that are now just ending. These caps have had the unintended effect of discouraging entry by competitive suppliers.”⁹

Ohio is one of the states with capped POLR service prices. These caps are scheduled to expire on December 31, 2008. We have collected data on POLR prices in states with retail markets in order to see what might happen in Ohio after the rate caps expire.

⁸ The Electric Energy Market Competition Task Force was established by the Energy Policy Act of 2005 to conduct a study of competition within the wholesale and retail electric market and to submit a report to Congress.

⁹ The Electric Energy Market Competition Task Force, *Report to Congress on Competition in the Wholesale and Retail Markets for Electric Energy - Draft*, June 5, 2006, page 5.

Survey of Commercial Rates

In a nationwide study of electric costs, Dr. Kenneth Rose concluded in 2006 that wherever rate caps are expiring, high increases in electric rates follow. According to his report to the Virginia Legislature, "the economic health of these markets continues to be questionable with little effective competition evident especially for residential and small commercial consumers."¹⁰ The data we have collected and summarized in the Appendix supports this conclusion.

States that Have Suspended or Delayed Restructuring

California was an early participant in electric choice. Southern California was rocked with a then record-breaking 55% increase in electric rates in 2001 by Pacific Gas & Electric Co. (PG&E). California eventually suspended transition but not before further increases shook the state. In 2006, San Francisco customers saw a 3% increase and now face a 25% increase in 2007¹¹. Even with commercial rates between 13¢ and 16¢ per KWH in 2007, San Francisco's rates are still lower than some other southern California cities.

Eight states, including California, have either suspended or delayed electric choice. We gathered data on 2007 commercial electric costs for 4 different electric profiles¹² in 26 cities in these 8 states. The costs are shown in Table 1 in the Appendix. The table shows that California has some of the highest commercial rates among this group. Unfortunately, Ohio's commercial rates are not too far behind.

States that Allow Retail Access

Let's look at the recent history of market-based pricing as it emerged on the east coast in states that allow retail access. Summarized below are some key observations from the data in Table 2 of the Appendix.

- Boston was hit with a 70.9% increase in its 2006 rates over 2005. In 2007, Bostonians pay commercial rates up to 24¢ per kWh.
- Springfield, Massachusetts saw a 94.6% increase in 2006.¹³ Its small commercial businesses are paying close to 21 cents per kWh.
- New York City saw a 2006 rate increase of 35.4%. New Yorkers presently pay commercial rates approaching 23¢ per kWh.
- Under Connecticut Light & Power, electric rates rose 29 percent last year and are scheduled to go up another 16 percent in 2007. Commercial customers are paying between 20¢ and 22¢ per kWh depending upon electric profile.
- An expected 72% increase in electricity prices aroused so much protest in Baltimore that the state legislature met in special session and arranged to phase in the higher costs over several years. Commercial customers there are paying about 7.5¢ to 9.2¢ per kWh.

Compare these to the Ohio FirstEnergy companies who have had their commercial rates between approximately 11¢ and 18¢ per kWh over the last decade for the sample electric profile with a 42% load factor.

¹⁰ Barbara R. Alexander, Consumer Affairs Consultant, "Summary of Recent State Default Service Developments", Virginia, November 2006

¹¹ The Sacramento Bee, "Hikes in PG&E Rates Looming: Biggest Power Users Can Expect Increase Sept. 1 – and Maybe Another Soon After", August 22, 2006.

¹² Electric costs vary with different electric usage profiles primarily due to the demand charges associated with scheduling efficiency. For example, a 5-day 2-shift operation (50% load factor) will have a substantially lower unit cost of electricity than a 5-day 1-shift operation (35% load factor).

¹³ Lincoln Electric Service Rate Survey, Jan 1, 2006 @ www.csu.org/customer/rates/11923.pdf

Ohio's Neighboring States

Ohio's neighboring states that have recently opened their doors to electric choice have not fared any better.

- Illinois, under standard electric rate schedules, has seen 40% increases in 2007. Those customers previously under "special" contracts have seen their rates climb more than 100%. Some customers are given the option of amortizing the increases over three years.
- Pennsylvania customers continue to see a series of devastating rate increases which began in 2006.
 - Due to an auction that was held immediately after Hurricane Katrina in the summer of 2005, Pike County Light & Power customers saw their generation price jump 125%, which resulted in an overall electric rate increase of 75% by February, 2006.¹⁴
 - On January 1, 2007, on one side of the spectrum, industrial customers in Penn Power territory (a FirstEnergy company) were hit with a 60.7% increase. In a one-two punch, the employees of these businesses saw their residential rates leap 32.4%, climbing from 12.3¢ to 16.3¢ per kWh. With the exception of Duquesne Light, all other Pennsylvania utilities have negligible switching.

What can we learn from Pennsylvania which now has experienced "choice" up close since 2006? The *Pittsburgh Business Times* reported the following in June of 2006.

"Testimony from the PUC hearing shows that local companies and organizations such as Duquesne Light Holdings, U.S. Steel Corp., AK Steel Corp., Allegheny County and the Allegheny Conference are all concerned that rising electricity prices -- which can account for as much as 30 percent of some manufacturer's production costs -- will dissuade new business from locating here, drive away existing businesses or prevent companies from investing in local facilities.

Instead of promoting competition, the current plan has simply created artificially high prices and jeopardized economic development in Duquesne's service territory," downtown-based Duquesne Light said in a written statement submitted to the PUC.¹⁵

The Citizens Utility Board of Illinois has concluded that electric rate increases in that state will have a significant impact on the state's economy, draining revenue from businesses across the state. "...the ComEd and Ameren rate hikes that took effect January 2 will result in the loss of some 20,341 Illinois jobs. In addition to causing hardship for individual employees out of work, those job losses have a ripple effect throughout the state. Individuals will have less disposable income to spend, local stores and businesses will close and communities will be deprived of vital goods and services."¹⁶

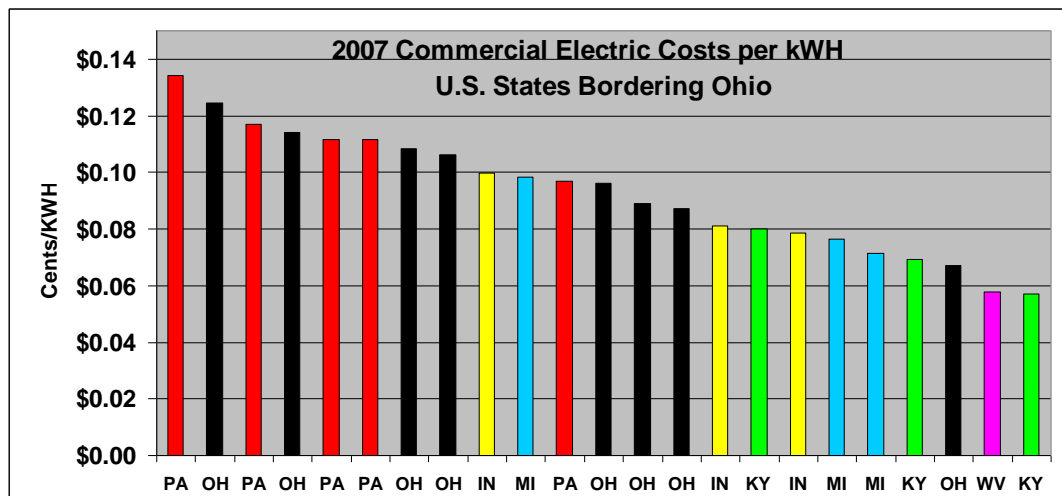
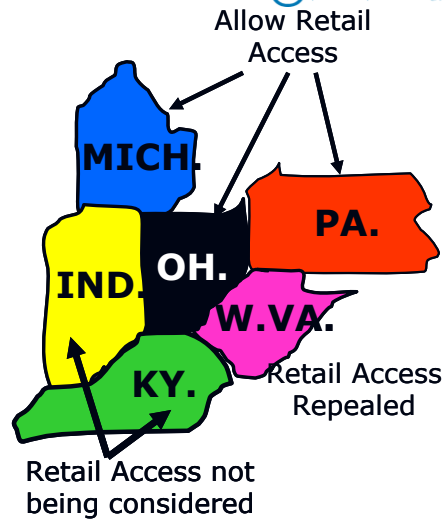
¹⁴ Barbara R. Alexander, Consumer Affairs Consultant, "Summary of Recent State Default Service Developments", Virginia, November 2006.

¹⁵ Jennifer Curry, "Local Electric Rates on the Rise...Large industrial, commercial users say cost makes Pa. less competitive", *Pittsburgh Business Times*, June 30, 2006

¹⁶ Citizens Utility Board, "Fewer Jobs for Illinois: The economic Impact of the ComEd and Ameren Rate Hikes", February 2007, page 6

If Ohio's rates increase, there would be greater pressure for businesses and employees to move to four of the five states bordering Ohio. While Michigan, Pennsylvania and Ohio are deregulating, Indiana, Kentucky and West Virginia are not; they have some of the lowest electric costs in the United States.

The graph below shows a comparison of Ohio's 2007 commercial electric rates¹⁷ (in black) for its 8 largest utilities to those in the five states bordering Ohio. Our data base includes 23 utilities from Michigan, Indiana, Kentucky, West Virginia and Pennsylvania. (See Table 3 in the Appendix for the supporting data.)



The Reality for Commercial Customers

With no sustainable or robust market for the retail sale of electricity, generally fewer than 50% of small commercial and industrial customers are migrating to alternative generation suppliers in deregulated states. (See the Switching Activity Tables in the Appendix for data on the migration in Illinois, Massachusetts, Pennsylvania and Texas as of January 1, 2006.)

The Electric Energy Market Competition Task Force examined the implementation of retail electric competition in seven states. In 2006, they reported to Congress that, "Few alternative suppliers currently serve residential customers, although industrial customers have additional choices. To the extent that multiple suppliers serve retail customers, prices have not decreased as expected, and the range of new options and services is limited."

Large customers tend to switch suppliers more than small customers. The task force noted that more suppliers have made efforts to solicit large customers. The task force went on to speculate about the reasons for the lack of migration of small customers to alternative suppliers. "One reason why retail competition for small customers may be slow to develop is that it is difficult [to] for the consumer to find competitive supplier offers in the first place and to understand the terms and conditions of those offers. It also is unclear whether the effort to find this information is justified by the potential cost savings that can be realized. As and

¹⁷ Based on a commercial electric profile of a 500 KWD/150,000 KWH for a load factor of 42%.

when there are more alternative suppliers, it may result in greater potential savings."¹⁸

A recent article in the *Evansville Courier & Press*, provides an example of the failure of deregulation in Illinois to deliver lower electric prices to small commercial customers.

"Ellie Dorchincez can almost see the dollars evaporating every time she turns on the lights or opens the freezer at her small Farm Fresh grocery store. Her electric bill, which used to be about \$800 a month, has jumped to \$1,800. She's shut down a large freezer of frozen treats and now closes the store an hour early to cut costs but fears she still may have to raise prices and lay off workers."¹⁹

The Christian Science Monitor told the story in April, 2006 of another small commercial customer and the impact of deregulation in Pennsylvania.

"It's the slow season for the laundromat in tiny Milford, Pa., yet owner Darryl Wood has raised the price of a wash by 50 cents, to \$2.50. The reason? Electric rates have more than doubled since January, threatening to close the lid on a business his family has run for decades.

'I've already seen an electric bill higher than anything that I've ever gotten,' he says. 'I thought deregulation would bring rates down. Now, I'm just hoping we can hang on.'²⁰

¹⁸ The Electric Energy Market Competition Task Force, Report to Congress on Competition in the Wholesale and Retail Markets for Electric Energy – Draft, June 5, 2006, pages 4 and 6.

¹⁹ *Evansville Courier & Press*, "Electric Bills Climb Despite Changes", May 15, 2007.

²⁰ *The Christian Science Monitor*, "In Deregulation of Electric Markets, a Consumer Pinch", April 25, 2006.

Lessons Learned

Political Action Required

Under deregulation, local utilities are required to separate themselves from responsibility over the operation of generation and transmission assets. Based on FERC's policies and decisions, much of the responsibility for the wholesale electric market and transmission has been delegated to regional transmission organizations ("RTOs"). Ohio is one of the states that is actually split between two RTOs. Due to the fact that RTOs cross multiple state borders²¹, jurisdiction over transmission (see FERC map below) coordination between FERC/RTO regulation and state regulation becomes more necessary and important. To date this coordination has been missing and perhaps, as an unintended consequence, leaves states with less ability to shape outcomes.



(Map courtesy of the Federal Energy Regulatory Commission)

Ohio is subject to the same "markets" and the same laws of physics as other states. There is no reason to believe that our experience would be any different beginning January 1, 2009.

The protections of Ohio's rate stabilization plans are temporary. It is not a question of whether they will expire; it is a question of when. Court actions initiated by certain stakeholders such as the Office of Consumers Counsel ("OCC") could accelerate the end of the RSPs. The Ohio legislature and the PUCO have yet to address the vacuum that currently looms at the beginning of 2009 as described above. Unless decisive action is taken in 2007 to put in place a longer-term plan to protect Ohio from the existing dysfunctional electric market, we can expect electric rates to increase significantly on January 1, 2009 as they have in other states.

Ohio Stakeholders must take action in 2007 to effectively manage the risk of electric "rate shock" that has already hit many states. The policies, plans and actions of federal and state agencies have to be complementary (rather than working at cross purposes) to facilitate the coordination and cooperation we must have given the division of governmental authority.

²¹ Texas' RTO is self contained and therefore not subject to FERC authority.

The Industrial Energy Users – Ohio (IEU-Ohio) has developed an approach that addresses present electric generation issues at the local, state and federal level. (See www.ieu-ohio.org/information/education/.) IEU-Ohio has carefully reviewed the dynamics of the marketplace and has mapped out general strategies we need to implement before it will be possible to determine what role a competitive market can play to ensure a reliable supply at reasonable prices.

The OCC continues to press for Ohio to embrace “competition” as soon as possible. The OCC even goes as far as to continue its claim that it was a mistake not to go to open market at the end of 2005. On the second page of the OCC’s “Biennial Report on the State of Electric Restructuring” under the section titled, “Summary of Conclusions”, the OCC states the following:

The bottom line is that in the six years subsequent to the passage of Senate Bill 3, competition has never had the chance it was entitled to under the law. As a result, due to lost opportunities in the competitive market, customers in some parts of the state are possibly paying higher electric rates than they otherwise should have, had the plans for competition been properly structured in accordance with the law.²²

Consumer affairs consultant Barbara Alexander has concluded that competitive markets have not yielded the expected results. She writes, “Clearly, there is a growing disconnection between the promises that state legislators and regulators have presented as the basis for the move to retail competition and the actual prices that the wholesale market is pressing to send through to retail customers. Furthermore, the move to competition has transferred the power to set rates for retail customers from the state regulators to FERC because of the growing importance of the operation of the wholesale market in the establishment of retail prices.”²³

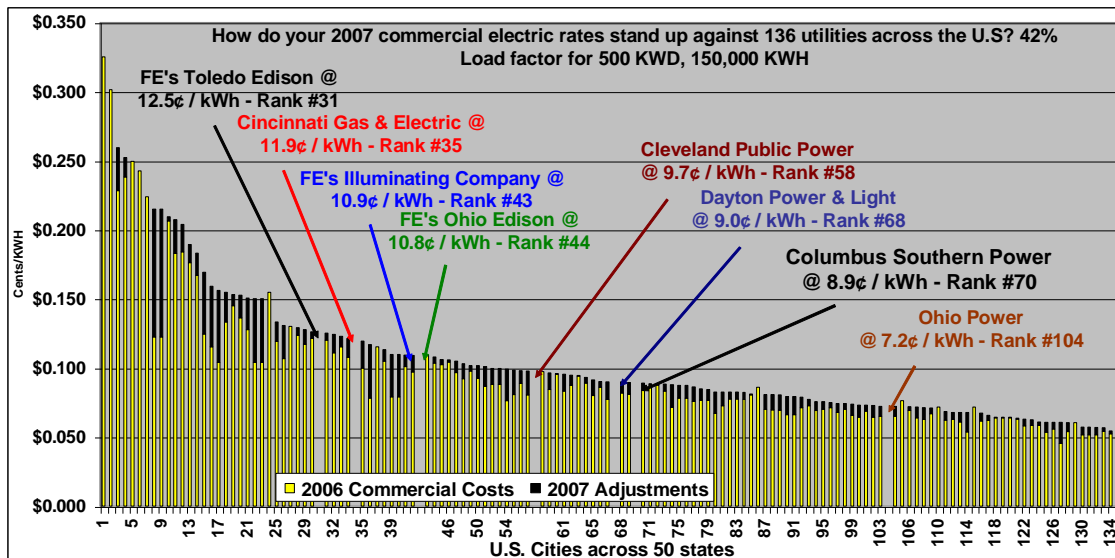
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²² Janine L. Migden-Ostrander, The Ohio Consumers’ Counsel, *Biennial Report to the Ohio General Assembly on the State of Electric Service Restructuring*, February 2007

²³ Barbara R. Alexander, *Default Service: Can Residential and Low Income Customers Be Protected when the Experiment Goes Awry?*, April 2001

Conclusions

Currently, Ohio's commercial electric rates are in the middle of the pack, as shown in the graph below, when compared to utilities across the United States.



States that have transitioned to open markets tend to have the highest rates, while states that remain regulated tend to have the lower rates.

Based upon the results of electric restructuring in other states, it appears that SB 3's timeline continues to be overly optimistic, even for a January 1, 2009 start date. Federal policymakers have not yet created a wholesale "market" that will produce the price efficiencies that one would expect to see arising from a truly competitive market. We conclude that competition has repeatedly been given a chance in one state after another over the last decade with disastrous results for customers. Many of the deficiencies in deregulated open markets are beyond the control of individual states. States cannot control FERC and the RTOs under FERC's watch.

Ohio is one of the most energy-intensive states in the nation, and as a result, it has more at stake as a result of its energy choices. It is critical for the economic health and competitiveness of Ohio to examine the long-range consequences of the decisions and actions taken today. In order to encourage businesses to stay and locate in Ohio, we need to create energy price and service outcomes that provide a strategic energy advantage in an increasingly global economy.

The realities of today's economy mean that we must have fair electricity pricing that allows us to be competitive domestically and internationally. We understand that the pricing result we must have involves a balancing of interests that ensures competitive prices while providing sustainability for our electric suppliers.

If no action is taken and Ohio proceeds to open market on January 1, 2009, we expect that residential, commercial and industrial customers would see rate jumps of 30% to 70% in 2009. We endorse an IEU-Ohio plan that requires urgent action on several fronts to effectively manage the risk of electric rate shock that has already arrived in many states.

- At the state level, the Ohio Legislature should give the Public Utility Commission more power to protect Ohio's economy and consumers. Without improved regulatory authority, Ohioans risk the type of instability that is devastating states throughout the U.S.
- At the federal level Ohio stakeholders need to actively pressure the FERC to compliment Ohio's efforts to ensure that its citizens have access to reliable and reasonably priced electricity.

The choice between regulation and competition is a choice between the means to better serve consumers and the public interest with reliable service and reasonable prices. If the aforementioned action is not taken, the consequences for Ohio will be disastrous. All Ohioans will experience a jolt every time they open their electric bills beginning in 2009!

Data Sources

Lincoln Electric System, National Electric Rate Survey, Ranking of Typical Residential, Commercial and Industrial Electric Bills, January 1, 2006.

Lincoln Electric System (LES) collected data on electric rates in 106 U.S. cities (served by Municipals or Investor-owned Utilities) based on monthly electric bills by various categories of usage for residential, commercial and industrial rates in effect on January 1, 2006.

LES originally selected cities in 1984 to be included in the rankings based on the following criteria:

- Cities with a population greater than 100,000
- A minimum of one city from every state
- A maximum of three cities from any state

LES obtained the majority of the data for investor-owned utilities from the Rate Regulation Department of the Edison Electric Institute (EEI) publication, *Typical Bills and Average Rates Report, winter 2006*. The data for municipal utilities and investor-owned utilities not included in the EEI publication was obtained through a survey conducted by LES. No attempt was made to verify either the data obtained from the survey or the EEI publication.

Brakey Consulting supplemented the data from the LES survey to add more Ohio utilities. The LES survey included the Ohio cities of Cleveland (the Illuminating Company), Columbus (AEP) and Cincinnati (Cincinnati Gas & Electric). Based upon our knowledge of Ohio electric rates, we expanded the data to include the following cities and utilities:

- Akron (Ohio Edison)
- Canton (Ohio Power)
- Cleveland (Cleveland Public Power)
- Dayton (Dayton Power and Light)
- Toledo (Toledo Edison)

We also reviewed and corrected some data for Columbus (AEP).

Brakey Consulting did research on-line to supplement data with:

- Electric rates in more than 70 additional cities outside Ohio
- Information on demand windows, power factor charges, seasonal variations and ratchet clauses for more than 150 utilities.
- Rate increases since January 1, 2006

Glossary of Terms

Apparent power: The product of the voltage (in volts) and the current (in amperes). It comprises both active and reactive power. It is measured in "volt-amperes" and often expressed in "kilovolt-amperes" (kVA) or "megavolt-amperes" (MVA).

Commercial sector: An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment (EIA definition).

Electric utility: Any firm that generates, transmits, or distributes electricity and that recovers the cost of its generation, transmission or distribution assets and operations, either directly or indirectly, through cost-based rates set by a separate regulatory authority (e.g., State Public Service Commission): or is owned by a governmental unit or the consumers that the entity serves. Examples of an "electric utility" include: Investor-owned entities, public power districts, public utility districts, municipalities, rural electric cooperatives, State and Federal agencies, and associations part of the aforementioned groups.

Federal Energy Regulatory Commission (FERC): A quasi-independent regulatory agency within the Department of Energy having jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification.

Industrial sector: An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing; agriculture, forestry, fishing and hunting; mining, including oil and gas extraction; and construction. Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities.

Kilovolt-Ampere (kVa): A unit of apparent power, equal to 1,000 volt-amperes; the mathematical product of the volts and amperes in an electrical circuit.

Kilowatt hour (kWh): A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000 watts) of power expended for 1 hour. One kWh is equivalent to 3,412 Btu.

Load Factor: A measure of scheduling efficiency equal to the ratio of kilowatt-hours used per hour in the billing period to the peak demand. As you spread your electric usage more evenly across the month, the load factor approaches 100%.

MISO: Midwest Independent Transmission System Operator, a regional transmission organization (RTO).

Open Market: In an open market, rates for electric generation are established in an unregulated, competitive market through competitive bidding or through negotiations between the buyer and seller.

Peak demand: The maximum load during a specified period of time.

PJM: Pennsylvania/New Jersey/Maryland Interconnection, a regional transmission organization (RTO).

Power factor: The ratio of real power (in kilowatts) to apparent power in kilovolt-amperes for any given load and time. Power factor is a measure of how effectively your equipment is converting electric current from the generation station to useful power output.

Provider of Last Resort (POLR): The local distributing company (LDC) or utility. The POLR provides a market-based Standard Offer Service for customers whose price freeze service has ended and who have not selected an alternative generation supplier.

Rate Schedule: A series of calculations to determine the monthly electric bill. Utilities have different rate schedules for different customer types. For example, there are rate schedules that are only available to residential customers. Other rate schedules might have requirements related to the amount of electricity used, or the type of operation.

Regional Transmission Organization (RTO): A utility industry concept that the Federal Energy Regulatory Commission (FERC) embraced for the certification of voluntary groups that would be responsible for transmission planning and use on a regional basis.

Residential sector: An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters (EIA definition).

Restructuring: The introduction of competition into at least the generation phase of electricity production, with a corresponding decrease in regulatory control.

Stranded costs: Costs incurred by utilities to serve their customers (e.g., for constructing generation plants) which are to be recovered over time through electric rates. These costs become "stranded" when customers leave their present utility for another generation supplier and no longer pay their share of these costs.

Unbundling: In a regulated environment, the generation, transmission, and distribution of electric power to the customer are provided as a single package. With unbundling, these services are separated into individually priced components.

Volt-ampere (va): A unit of apparent power equal to the product of 1 volt and 1 ampere. This is equivalent to 1 watt for a direct current system.

Voltage: The difference in electrical potential between any two conductors or between a conductor and ground. It is a measure of the electric energy per electron that electrons can acquire and/or give up as they move between the two conductors.

Watt (W): The unit of electrical power equal to one ampere under a pressure of one volt. A Watt is equal to 1/746 horsepower.

About Brakey Consulting

Brakey Consulting, Inc. is an Ohio-based company providing energy consulting services to about 40 industrial and commercial businesses with facilities in over 100 locations in the greater Cleveland, Akron, Toledo and Youngstown areas. Brakey Consulting fills a void for companies who do not have an energy manager on staff. Our services include:

- Helping companies identify electric cost saving opportunities, such as improving power factor or scheduling efficiency, or switching rate schedules
- Using gas marketers to implement hedging strategies for the purchase of natural gas
- Sponsoring an association, known as MICA, for whom Brakey Consulting proactively keeps up to date on energy suppliers and energy prices
- Representing MICA members at meetings of the Industrial Energy Users – Ohio (IEU), an energy lobbying group based in Columbus, Ohio
- Working closely with our sister company, EnergyManager.com, to provide on-line electric bill audits and analysis

Michael Brakey, President and founder of Brakey Consulting, has energy-related experience in the manufacturing setting. Immediately before starting Brakey Consulting in 1999, Mike held various posts over a 22-year career at Johnson Rubber Company in Middlefield, Ohio. His accomplishments there included the implementation of manufacturing strategies that led to energy cost reductions in excess of \$20 million. Mike has a B.S. in engineering physics from the University of Maine and an E.M.B.A. from Baldwin-Wallace College.

Lucinda Brakey, Vice President, joined the firm in January 2005. Prior to that, Cindy had a 20-year career as a consulting actuary for Towers Perrin in Cleveland, Ohio. Cindy also serves as vice president of EnergyManager.com. She has a B.A. in mathematics from the University of Maine and an M.A. in actuarial mathematics from the University of Michigan.

Matthew Brakey, Vice President, joined the firm in June 2004. Matt is also president of EnergyManger.com. He has a B.A. in political science from Miami University.

Appendix

Electric Usage Profiles

Commercial businesses operate on different schedules. Businesses that have a 5-day, 1-shift operation will see substantially higher electric costs per kilowatt hour than businesses that operate 7 days per week and 3 shifts per day, or around the clock. We recommend that commercial businesses, when examining the tables in this appendix, select the schedule that most accurately reflects their operation.

Four different electric profiles are used in the tables of cost data in this appendix, as shown in the table below.

Profiles	1	2	3	4
Kilowatt hours used	10,000	14,000	150,000	180,000
Demand load in kilowatts	40	40	500	500
Load factor	35%	49%	42%	50%
Approximate operating schedule	6 days/week 1 shift/day	5 days/week 2 shifts/day	7 days/week 1 shift/day	5 days/week 2 shifts/day

The costs in the following tables are ranked from highest to lowest based upon the rates for the third profile, with a 42% load factor.

Table 1: Ranking of Commercial Rates in States that Have Suspended or Delayed Restructuring

We gathered data on 2007 commercial electric costs for 4 different electric profiles in 26 cities in 8 states that have either suspended or delayed electric choice.

			Status of Restructuring	Commercial 2007				Name of Utility (M) - Municipal (I) - Investor-Owned	
				Increase 2007 over 2006	35%	49%	42%		50%
				40kW 10,000 kWh	40kW 14,000 kWh	500kW 150,000 kWh	500kW 180,000 kWh		
1	California	San Diego (I,W)	S	2.0%	\$0.216	\$0.187	\$0.187	\$0.175	San Diego Gas & Electric Company (I)
2	California	San Bernardino (I)	S	0.0%	\$0.167	\$0.159	\$0.184	\$0.178	Southern California Edison Company (I)
3	California	San Francisco (I,W)	S	25.0%	\$0.159	\$0.148	\$0.144	\$0.138	Pacific Gas & Electric Company (I)
4	Ohio	Toledo (I,W)	D	0.0%	\$0.128	\$0.118	\$0.120	\$0.081	Toledo Edison (I)
5	New Mexico	Santa Fe (I,A)	D	10.9%	\$0.123	\$0.107	\$0.118	\$0.110	Southwestern Public Service Company (I)
6	California	Palo Alto (M)	S	0.0%	\$0.127	\$0.119	\$0.115	\$0.110	City of Palo Alto Utilities (M)
7	California	Sacramento (M)	S	0.0%	\$0.127	\$0.119	\$0.115	\$0.110	Sacramento Mun. Utility District (M)
8	Nevada	Las Vegas (I,A)	D	0.0%	\$0.075	\$0.074	\$0.111	\$0.109	Nevada Power Company (I)
9	Ohio	Cleveland (I,W)	D	0.0%	\$0.130	\$0.114	\$0.109	\$0.100	Cleveland Electric Illuminating Company (I)
10	Ohio	Cincinnati (I,W)	D	9.1%	\$0.122	\$0.101	\$0.109	\$0.098	Cincinnati Gas & Electric Company (I)
11	Ohio	Akron (I,W)	D	0.0%	\$0.116	\$0.101	\$0.103	\$0.091	Ohio Edison (I)
12	Nevada	Reno (I,A)	D	0.0%	\$0.129	\$0.118	\$0.101	\$0.099	Sierra Pacific Power Company (I)
13	California	Los Angeles (M,A)	S	0.0%	\$0.115	\$0.097	\$0.098	\$0.090	Los Angeles Dept. of Water & Power (M)
14	Montana	Billings (I,A)	D	15.0%	\$0.108	\$0.096	\$0.093	\$0.088	Montana Power (I)
15	Ohio	Columbus (I,W)	D	5.0%	\$0.097	\$0.091	\$0.088	\$0.075	Columbus Southern Power Rate Area (I)
16	Oklahoma	Tulsa (I,W)	D	8.0%	\$0.091	\$0.088	\$0.087	\$0.084	Public Service Company of Oklahoma (I)
17	Ohio	Dayton (I,W)	D	5.4%	\$0.096	\$0.083	\$0.086	\$0.079	Dayton Power & Light (I)
18	Oklahoma	Oklahoma City (I,W)	D	8.0%	\$0.093	\$0.085	\$0.082	\$0.079	Oklahoma Gas & Electric Services (I)
19	New Mexico	Santa Cruz (I)	D	18.0%	\$0.096	\$0.093	\$0.081	\$0.080	El Paso Electric Company (I)
20	Montana	Bismarck (I,A)	D	0.0%	\$0.067	\$0.060	\$0.080	\$0.075	Montana-Dakota Utilities Company
21	Virginia	Norfolk (I,W)	D	15.0%	\$0.090	\$0.077	\$0.076	\$0.067	Dominion Virginia Power (I)
22	Virginia	Richmond (I,W)	D	15.0%	\$0.090	\$0.077	\$0.076	\$0.067	Dominion Virginia Power (I)
23	Ohio	Canton (I,W)	D	10.0%	\$0.077	\$0.071	\$0.071	\$0.069	Ohio Power Rate Area (I)
24	New Mexico	Albuquerque (I,A)	D	0.0%	\$0.078	\$0.077	\$0.070	\$0.063	Public Service Company of New Mexico (I)
25	Virginia	Roanoke (I,A)	D	25.0%	\$0.073	\$0.065	\$0.067	\$0.061	Appalachian Power Rate Area (I)
26	Arkansas	Little Rock (I,W)	D	0.0%	\$0.070	\$0.065	\$0.064	\$0.059	Entergy Arkansas, Inc. (I)

Table 2a: Ranking of POLR Commercial Rates in Open Market States and Ohio

Highest 24 commercial electric rates²⁴ for 2007 for utilities found in states active in open markets and Ohio (which has delayed restructuring)

	State	City	Increase 2006 over 2005	Increase 2007 over 2006	Load Factor				Name of Utility / (M) = Municipal, (I) = Investor-Owned
					35%	49%	42%	50%	
					40kW 10,000 kWh	40kW 14,000 kWh	500kW 150,000 kWh	500kW 180,000 kWh	
1	Massachusetts	Boston (I,W)	70.9%		\$0.189	\$0.173	\$0.238	\$0.230	Boston Edison Company (I)
2	Massachusetts	Cambridge (I,W)	85.5%		\$0.197	\$0.178	\$0.228	\$0.221	Cambridge Electric Company (I)
3	New York	New York City (I,W)	35.4%		\$0.232	\$0.218	\$0.224	\$0.217	Consolidated Edison Company of New York (I)
4	Massachusetts	Springfield (I,A)	94.6%		\$0.157	\$0.146	\$0.206	\$0.201	Western Massachusetts Electric Company (I)
5	New York	Hempstead (I,W)	42.3%		\$0.185	\$0.174	\$0.176	\$0.171	Long Island Public Authority (I)
6	New York	Buffalo (I,W)	16.9%		\$0.136	\$0.125	\$0.167	\$0.160	Niagara Mohawk Power Corporation (I)
7	Maine	Portland (I,A)	24.6%		\$0.157	\$0.145	\$0.145	\$0.140	Central Maine Power Company (I)
8	Rhode Island	Pawtucket (I,A)	33.4%		\$0.150	\$0.143	\$0.136	\$0.134	Narragansett Electric Company (I)
9	Texas	Dallas (I,W)	39.1%		\$0.148	\$0.134	\$0.133	\$0.126	TXU Energy (I)
10	New Hampshire	Manchester (I,A)	12.9%		\$0.140	\$0.131	\$0.130	\$0.125	Public Service Company of New Hampshire (I)
11	Connecticut	Waterbury (I,A)	28.9%	16.0%	\$0.178	\$0.166	\$0.128	\$0.122	Northeast Utility-Connecticut Light & Power Company (I)
12	Pennsylvania	Philadelphia (I,W)	6.2%		\$0.134	\$0.119	\$0.123	\$0.117	PECO Energy (I)
13	Connecticut	Bridgeport (I,W)	3.3%	50.0%	\$0.130	\$0.121	\$0.122	\$0.118	United Illuminating Company (I)
14	Connecticut	New Haven (I,W)	3.3%	50.0%	\$0.130	\$0.121	\$0.122	\$0.118	United Illuminating Company (I)
15	Texas	El Paso (I,W)	10.4%		\$0.132	\$0.115	\$0.121	\$0.113	El Paso Electric Company (I)
16	Ohio	Toledo (I,W)	1.0%		\$0.128	\$0.118	\$0.120	\$0.081	Toledo Edison (I)
21	Ohio	Cleveland (I,W)	1.0%		\$0.130	\$0.114	\$0.109	\$0.100	Cleveland Electric Illuminating Company (I)
22	Arizona	Phoenix (I,W)	2.5%	4.4%	\$0.097	\$0.120	\$0.107	\$0.107	Arizona Public Service Company (I)
24	District of Columbia	Washington, DC (I,W)	40.4%		\$0.113	\$0.107	\$0.104	\$0.100	Potomac Electric Power Company (I)

M – Municipally-owned utility
I – Investor-owned utility
W – Winter rates shown
A – Annual rates

²⁴ These rates include the generation costs charged by the Provider of Last Resort (POLR), which is the local distributing company (LDC) or utility. The generation costs available from alternative suppliers may be less. POLR provides a market-based Standard Offer Service for customers whose price freeze service has ended and no supplier has been selected.

Table 2b: Ranking of POLR Commercial Rates in Open Market States and Ohio (continued)

Second 24 highest commercial electric rates for 2007 for utilities found in states active in open markets and Ohio (which has delayed restructuring)

	State	City	Increase 2006 over 2005	Increase 2007 over 2006	Load Factor				Name of Utility / (M) = Municipal, (I) = Investor-Owned
					35%	49%	42%	50%	
					40kW 10,000 kWh	40kW 14,000 kWh	500kW 150,000 kWh	500kW 180,000 kWh	
25	Pennsylvania	Erie (I,W)	3.2%	32.4%	\$0.113	\$0.113	\$0.104	\$0.100	Pennsylvania Electric Company F(I)
26	Pennsylvania	Johntown (I)		32.4%	\$0.113	\$0.113	\$0.104	\$0.100	Penelec (I)
27	Pennsylvania	New Castle (I)	3.2%	32.4%	\$0.113	\$0.113	\$0.104	\$0.100	Penn & Pennsylvania Power Company (Penelec) (I)
28	Ohio	Akron (I,W)	1.0%		\$0.116	\$0.101	\$0.103	\$0.091	Ohio Edison (I)
30	Ohio	Cincinnati (I,W)	24.2%	9.1%	\$0.112	\$0.093	\$0.100	\$0.090	Cincinnati Gas & Electric Company (I)
32	Texas	Austin (M,W)	10.2%		\$0.105	\$0.091	\$0.097	\$0.089	Austin Energy (M)
33	New Jersey	Newark (I,W)	8.2%		\$0.097	\$0.091	\$0.088	\$0.085	Public Service Electric & Gas Company (I)
34	New Jersey	Paterson (I,W)	8.2%		\$0.097	\$0.091	\$0.088	\$0.085	Public Service Electric & Gas Company (I)
35	Michigan	Detroit (I,W)	3.2%		\$0.098	\$0.096	\$0.087	\$0.079	Detroit Edison Company (DTE Energy) (I)
36	Arizona	Tucson (I,W)	4.5%	4.4%	\$0.104	\$0.102	\$0.087	\$0.083	Tucson Electric Power Company (I)
37	Ohio	Columbus (I,W)	9.0%	5.0%	\$0.093	\$0.087	\$0.084	\$0.071	Columbus Southern Power Rate Area (I)
38	Ohio	Dayton (I,W)	11.0%	5.4%	\$0.091	\$0.079	\$0.082	\$0.075	Dayton Power & Light (I)
41	Pennsylvania	Pittsburgh (I,A)	0.0%	9.0%	\$0.100	\$0.084	\$0.080	\$0.078	Duquesne Light Company (I)
43	Illinois	Chicago (I,W)	-0.1%	40.0%	\$0.091	\$0.077	\$0.079	\$0.073	Commonwealth Edison Company (I)
44	Illinois	Rockford (I,W)	-0.1%	40.0%	\$0.091	\$0.077	\$0.079	\$0.073	Commonwealth Edison Company (I)
45	Illinois	Springfield (M,W)	11.7%	40.0%	\$0.083	\$0.076	\$0.078	\$0.073	City of Springfield, IL City Water Light & Power Dept. (M)
46	Maryland	Baltimore (I,W)	-4.4%	15.0%	\$0.092	\$0.091	\$0.077	\$0.075	Baltimore Gas & Electric Company (I)
48	Delaware	Dover (M)			\$0.081	\$0.070	\$0.071	\$0.066	City of Dover (McKee Run G.S.)

M – Municipally-owned utility
I – Investor-owned utility
W – Winter rates shown
A – Annual rates

Table 3: Commercial Electric Rates in Ohio and Bordering States

Commercial electric rates for utilities found in Ohio and the five bordering states (based on varying load factors). The 2007 rates are ranked from highest to lowest based on the rates for the profile with a load factor of 42%.

		Commercial 2007						Name of Utility (M) - Municipal (I) - Investor-Owned	
		Increase 2006 over 2005	Increase 2007 over 2006	35%	49%	42%	50%		
				40kW 10,000 kWh	40kW 14,000 kWh	500kW 150,000 kWh	500kW 180,000 kWh		
1	Pennsylvania	Johntown (I)		32.4%	\$0.149	\$0.149	\$0.137	\$0.132	Penelec (I)
2	Pennsylvania	Erie (I,W)	3.2%	32.4%	\$0.149	\$0.149	\$0.137	\$0.132	Pennsylvania Electric Company F(I)
3	Pennsylvania	New Castle (I)	3.2%	32.4%	\$0.149	\$0.149	\$0.137	\$0.132	Penn & Pennsylvania Power Company (Penelec) (I)
4	Pennsylvania	Philadelphia (I,W)	6.2%		\$0.134	\$0.119	\$0.123	\$0.117	PECO Energy (I)
5	Ohio	Cincinnati (I,W)	24.2%	9.1%	\$0.122	\$0.101	\$0.109	\$0.098	Cincinnati Gas & Electric Company (I)
6	Ohio	Toledo (I,W)	1.0%		\$0.128	\$0.118	\$0.120	\$0.081	Toledo Edison (I)
7	Ohio	Cleveland (I,W)	1.0%		\$0.130	\$0.114	\$0.109	\$0.100	Cleveland Electric Illuminating Company (I)
8	Ohio	Akron (I,W)	1.0%		\$0.116	\$0.101	\$0.103	\$0.091	Ohio Edison (I)
9	Pennsylvania	Pittsburgh (I,A)	0.0%	9.0%	\$0.109	\$0.092	\$0.088	\$0.086	Duquesne Light Company (I)
10	Indiana	Gary (I,A)	5.1%		\$0.110	\$0.098	\$0.095	\$0.089	Northern Indiana Public Service Company (I)
11	Michigan	Detroit (I,W)	3.2%		\$0.098	\$0.096	\$0.087	\$0.079	Detroit Edison Company (DTE Energy) (I)
12	Ohio	Cleveland (M,A)	3.0%		\$0.109	\$0.103	\$0.097	\$0.093	Cleveland Public Power (M)
13	Ohio	Dayton (I,W)	11.0%	5.4%	\$0.096	\$0.083	\$0.086	\$0.079	Dayton Power & Light (I)
14	Ohio	Columbus (I,W)	9.0%	5.0%	\$0.097	\$0.091	\$0.088	\$0.075	Columbus Southern Power Rate Area (I)
15	Indiana	Evansville (I,W)	10.0%		\$0.081	\$0.072	\$0.070	\$0.065	Southern Indiana Gas & Electric Company (I)
16	Kentucky	Paducah (M)			\$0.086	\$0.085	\$0.086	\$0.079	Paducah Power System (M)
17	Indiana	Indianapolis (I,A)	7.9%		\$0.077	\$0.074	\$0.069	\$0.063	Indianapolis Power & Light Company (I)
18	Michigan	Grand Rapids (I,W)	-2.6%		\$0.081	\$0.068	\$0.065	\$0.060	Consumers Energy (I)
19	Ohio	Canton (I,W)	19.0%	10.0%	\$0.077	\$0.071	\$0.071	\$0.069	Ohio Power Rate Area (I)
20	Michigan	Lansing (M,W)	9.7%		\$0.078	\$0.068	\$0.069	\$0.063	Lansing Board of Water & Light (M)
21	Kentucky	Louisville (I,W)	-1.9%		\$0.074	\$0.060	\$0.061	\$0.054	Louisville Gas & Electric Company (I)
22	West Virginia	Wheeling (I,A)	-1.9%		\$0.056	\$0.053	\$0.051	\$0.049	Wheeling Power Rate Area (I)
23	Kentucky	Lexington (I,A)	4.8%		\$0.062	\$0.052	\$0.051	\$0.047	Kentucky Utilities Company (I)

Switching Activity Tables

These switching activity tables are from the Electric Energy Market Competition Task Force's *Report to Congress on Competition in the Wholesale and Retail Markets for Electric Energy - Draft*, June 5, 2006

Illinois

Switching Activity: The degree to which customers have switched to delivery service from bundled service varies greatly between distribution franchise territories and classes of customers. Table 2 provides the switching statistics for the largest utilities franchise areas separated by customer type as of November 2005. As Table 3 indicates, the vast majority of switching activity is centered on the Commonwealth Edison distribution territory (which also has the largest load in the state). Lower levels of switching have taken place in the AmerenCILCO and AmerenIP areas and very little outside of these three.

Firm and Usage In million kWh	Residential	Small C&I	Large C&I	Total
AmerenCILCO 461	0.0% (0.0%)	0.0% (0.1%)	2.2% (33.3%)	0.0% (15.4%)
AmerenCIPS 952	0.0% (0.0%)	0.2% (0.8%)	7.1% (4.1%)	0.0% (2.2%)
AmerenIP 1,496	0.0% (0.0%)	0.8% (8.9%)	29.8% (41.7%)	0.1% (23.2%)
AmerenUE 265	0.0% (0.0%)	0.0% (0.0%)	2.5% (0.2%)	0.0% (0.1%)
ComEd 91,508	0.0% (0.0%)	6.0% (36.6%)	73.9% (58.3%)	0.6% (32.8%)
MidAmerican	0.0%	0.0%	0.0%	0.0%

Massachusetts

Switching Activity: Table 12 shows the proportion of customers and load taking service from alternative suppliers in each utility distribution territory. In the Commonwealth territory, switching by residential customers is much higher than any other area of the state.

Firm and load in MWh	Residential	Small C&I	Medium C&I	Large C&I
Boston Edison 1,498,476	0.3% (0.6%)	2.0% (3.5%)	7.9% (13.6%)	34.0% (50.0%)
Cambridge 154,540	0.2% (0.3%)	6.7% (13.5%)	8.4% (12.4%)	33.6% (52.6%)
Commonwealth 403,108	54.2% (51.8%)	55.0% (57.5%)	44.3% (46.2%)	65.6% (70.5%)
Fitchburg 47,256	0.0% (0.0%)	3.8% (2.9%)	4.8% (15.5%)	72.7% (86.6%)
Mass. Electric 1,995,096	2.1% (2.4%)	7.4% (12.2%)	31.1% (29.3%)	58.1% (66.2%)
Nantucket 12,547	0.2% (1.3%)	4.4% (6.6%)	23.6% (29.3%)	50.0% (53.2%)
Western Mass.	0.5% (0.7%)	6.6% (11.9%)	32.4% (36.8%)	60.2% (76.3%)

Source: Mass. Department of Telecommunications and Energy

Note: C = Commercial, I = Industrial

Pennsylvania

Switching Activity: At this point in time, retail switching activities are largely limited to the Duquesne Light distribution territory and to a lesser degree the PECO territory, as shown in Table 27.

Firm and Load in MWh	Residential	Small C&I	Large C&I	Total
Allegheny Power	0.0% (0.0%)	0.0% (0.0%)	0.0% (0.0%)	0.0% (0.0%)
Duquesne Light	19.7% (18.5%)	20.3% (52.3%)	43.4% (83.6%)	19.8% (48.0%)
MetEd/Penelec	0.0% (0.0%)	0.0% (0.0%)	(0.1%) (5.6%)	0.0% (1.6%)
PECO	0.9% (1.0%)	23.8% (13.2%)	2.0% (1.2%)	3.2% (4.9%)
PennPower	0.0% (0.0%)	0.0 (0.0%)	0.0 (0.0%)	0.0 (0.0%)
PPL	0.0 (0.0%)	0.2 (0.7%)	0.3 (0.3%)	0.1 (0.3%)
UGI	0.0 (0.0%)	0.0 (0.0%)	0.0 (0.0%)	0.0 (0.0%)

Source: Pennsylvania Office of the Consumer Advocate

Texas

Switching Activity: Retail customers have been migrating to alternative suppliers in all of the distribution territories with the highest switching rates in the AEP Central and North areas, as shown in Table 32.

Firm and Load in MWh	Residential	Small C&I	Total
TXU	26.3% (26.2%)	30.7% (64.7%)	26.4% (50.4%)
Centerpoint	26.8% (27.3%)	34.5% (60.7%)	27.5% (47.8%)
AEP Texas Central	27.0% (31.3%)	45.8% (81.4%)	29.4% (63.8%)
AEP Texas North	33.2% (39.3%)	34.0% (78.7%)	31.9% (64.9%)
Texas NM Power	25.8% (29.9%)	35.0% (66.8%)	26.4% (56.0%)

Source: Texas Public Utility Commission

Note: C = Commercial, I = Industrial