

Retail Electric Competition in New York: Benefits for the Present, Promise for the Future

An Examination of Progress of Electric Market Restructuring in New York State, 1995-Present

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Capitol Hill Research Center White Paper



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EXECUTIVE SUMMARY

The purpose of this White Paper is to assess the impact that retail electric competition has had in New York State. Based both on qualitative and quantitative analyses, the inescapable and irrefutable conclusion is that for consumers who have chosen competitive suppliers, the following benefits have resulted:

- increased supply choices through value-added products and services;
- downward pressure on prices;
- enhanced price transparency for all consumers, especially residential consumers;
- environmental improvements through energy efficiency and demand response; and
- reduced stranded costs for ratepayers.

By all measurements, where the New York Public Service Commission (“PSC”) has implemented a retail electric market structure that enables customers to know their true costs of consumption through market-reflective price signals and enables competitive energy service companies (ESCOs) to use this information to develop a variety of product offerings tailored specifically to the customer’s needs, the benefits of retail electric competition set forth above have been realized.

New York State is widely viewed as a national leader in bringing the benefits of a robust and sustainable retail electric market structure to its citizenry and businesses. In fact, the recently released *Report To Congress on Competition in Wholesale and Retail Markets for Electric Energy*¹ created by a task force (Task Force) comprised of the Federal Energy Regulatory Commission (FERC), and four other federal governmental agencies, stated that the promise of retail competition has come true and has provided lower prices for commercial and industrial consumers, and in the cases of New York, Texas and Massachusetts has also come true to varying degrees for residential customers. New York has one of the most active and competitive retail energy markets in the nation with more than 75 ESCOs providing an array of innovative, value-added services tailored to meet the customer’s specific needs and requirements. In addition, data compiled by the Energy Information Administration (EIA) indicates that electricity prices have actually declined in real terms since the PSC initiated retail competition.² Furthermore, customer migration to competitive commodity supply options has grown exponentially, with switching activity increasing significantly in 2006 in all market sectors – residential, small commercial and large commercial and industrial.

¹ See The Electric Energy Market Competition Task Force, *Report To Congress on Competition in Wholesale and Retail Energy Markets For Electric Energy*, (April 6, 2007), hereinafter referred to as the Federal Competition Report. The Energy Policy Act of 2005 required the Task Force to conduct a study and analysis of competition within the wholesale and retail market for electric energy in the United States and to submit a report to the United States Congress. The five-member Task Force, comprised of representatives from the Departments of Justice, Energy and Agriculture, and the Federal Energy Regulatory Commission and the Federal Trade Commission, consulted with and solicited comments from the States, representatives of the electric power industry and the public.

² Information can be found at the EIA website;
http://www.eia.doe.gov/cneaf/electricity/page/sales_revenue.xls

The White Paper will clearly demonstrate that the documented benefits of retail energy markets in New York State should dispel any misperceptions surrounding the price of electricity since 1996, availability of wide ranging energy product and service choices, and customer switching. First, electricity prices in real dollar terms (inflation adjusted) have declined since 1996. Second, where the PSC has permitted the correct retail electric market structure to be implemented, customer choices abound for every market segment with ample choices of competitive suppliers and supply products. Finally, the rate of customer migration has varied greatly depending on the specific electric restructuring program design that was adopted by the local electric distribution utilities. It is not surprising that the utilities that have embraced competitive markets and have adopted market rules that facilitate customer choice have experienced the greater amount of customer switching, expressed in terms of customer accounts and megawatt-hours. Conversely, those utilities that have created artificial shopping and enrollment periods, along with market rules that have oftentimes confused ratepayers in their service territories, have experienced limited customer switching.

It is a virtuous circle that competitive choice creates and, for the energy market, the benefits are enormous. Competition not only brings downward pressure on prices, but also improved service, new technologies, new service orientations and new organizations.³ Nowhere are the benefits greater than for the business sector, where energy costs have consistently ranked among the most important considerations for small business, along with health insurance costs and state and local taxes,⁴ and direct links have been demonstrated between those costs and job growth.⁵ Furthermore, with the ability to integrate energy efficiency and demand response measures into their electricity supply strategies, customers have an even greater ability to manage their energy costs and further benefit from competitive markets. Efficiency and demand reduction are concepts that were inherently at odds with the cost-of-service utility ratemaking model, but can thrive in a competitive market not driven by throughput but rather creativity and product innovation.

The public policy implications for New York State are quite clear. The Spitzer Administration has outlined a number of specific energy and related goals since it took office at the beginning of the year. Among those goals are lower energy costs, developing new and cleaner energy technologies, and economic revitalization through the reduction of the cost burden for the State's businesses. Given the success of electric restructuring – thus far, and the promise it holds for the future, the competitive energy

³ Isser, S, et al. (1998). "Enron's battle with PECO: an inside view from outside the industry," in *Public Utilities Fortnightly*. March 1, 1998 v136 n5 p38(6)

⁴ National Federation of Small Businesses (2005). "Small Firms' view of New York economy continues to sour: energy costs now rank with insurance as top business headache," at <http://www.nfib.com/object/sbcny1205.html>. Other surveys by NFIB show similar concerns about energy prices in other states.

⁵ *The Impact of Increased Energy Costs on Businesses and Jobs* (2006). Prepared by Management Information Services, Inc., for Americans for Balanced Energy Choices. November 2006. Available at <http://www.balancedenergy.org>

market is one of the most dynamic and effective tools the Administration has for achieving its goals.⁶

GOALS OF THE SPITZER ADMINISTRATION

In his State of the State Address, Governor Spitzer dedicated considerable time to the task of economic revitalization, noting that

“...we must reduce New York’s cost structure – the “perfect storm of unaffordability” – for both businesses and people... As the world has transformed and moved forward, it is only Albany that has stood still. As the economy becomes global, and reveals our competitive disadvantages, we must reduce the burdensome cost structures that have driven businesses out of our state.”⁷

While the Governor was referring more specifically to the costs of health insurance, workers compensation and property taxes, energy costs – which he identified as second highest in the country – are also a part of that burden.

In a speech last January to the New York State Energy Association, Lieutenant Governor David Paterson summed the goals of the Spitzer Administration’s energy policy into three key components - development of reliable energy infrastructure, driving down electric service cost, and maintaining good stewardship of the environment through conservation and the development of renewable energy. If New York is going to move forward, the Lieutenant Governor said,

“...we must provide a reliable infrastructure which can meet the increase in demand from its citizens and increase our economy. We must act now to improve our energy system. To accomplish this, we have to change our attitude about energy.”⁸

In a recent speech to the Saratoga Chamber of Commerce, the leader of the Business Council of New York State cited the reduction of energy costs as one of the three key elements to reviving the upstate economy.⁹

There is no better way to achieve the goals of the Spitzer Administration than through robust, vigorous competition, where regulatory oversight is to effectuate these aims, not restrict the methods by which to achieve them. To be sure, the Administration has

⁶ It should be noted that while this paper is focused primarily on the ratepayer benefits of retail electric competition in the State of New York, wholesale and retail competition are inextricably connected. In other words, a healthy and robust competitive retail electric market depends on a properly functioning wholesale electric market.

⁷ *State of the State Address* (2007), available at http://www.ny.gov/governor/keydocs/2007sos_speech.html; See also: Speech by Eliot Spitzer to the New York Association of Counties, January 30, 2007. http://www.state.ny.us/governor/keydocs/0130071_speech.html

⁸ Speech to Energy Association Breakfast, 1/17/07; available at http://www.ny.gov/governor/keydocs/0117071_dapspeech.html

⁹ Andersen, E. (2007). “Business Council head offers vision for upstate: Ken Adams says reforming workers' compensation is one of several ways to revive the economy,” in *Times Union* (Albany). 3/16/07.

embraced the virtues of competition in other public policy areas. In the opening days of his new administration, the Governor called for greater choice, competition and accountability in education policy in New York. Calling for a break from the existing public education paradigm, the Governor has embraced the concept of competition for the state's public schools. In his Executive Budget, he proposed raising the charter school cap to help demonstrate educational innovations that work, and make other schools compete. Charter schools make other public schools compete, the Governor argued, which is why many strong school administrators welcome their presence.

“We can choose a past of high property taxes, poor performance, and morally indefensible inequality - or a future of knowledge, opportunity and hope. I have already made my choice. Together I know we will redefine the future of New York.”¹⁰

This recognition that competitive choice is the best way to produce the highest service for all New Yorkers should not be reserved only for the field of public education. The argument applies equally well to the energy sector.

As discussed herein, energy restructuring in New York has proven successful where the correct retail market design has been permitted to develop. It also holds out the greatest promise for the Spitzer Administration to achieve its goals. At a time when New York must strive to remain economically competitive in terms of the retention and attraction of jobs and businesses into the state, the Administration should look to policies designed to encourage the continued develop of retail energy market structures that will benefit all New Yorkers.

ELECTRIC RESTRUCTURING IN NEW YORK STATE

For most of the twentieth century, the electricity industry operated under a classic monopolistic market structure whereby one utility firm received the “franchise rights” to produce, deliver and sell the entire load for a particular market area. By the mid-eighties, however, that perception was increasingly challenged by economists and policy-makers. Between 1974 and 1984, the average price of electricity in the United States increased by approximately 250 percent, an increase that attracted the attention of consumers and politicians alike.¹¹ Attempts by the industry to address these problems often resulted in poor investment decisions, most notably in nuclear power plant construction.

- In 1965, when the Long Island Lighting Company (LILCO) first announced its intention to build a nuclear plant in Suffolk County, elected officials fervently embraced the project. Within a year, LILCO acquired a 455-acre site between the sparsely populated hamlets of Shoreham and Wading River, and declared that its new plant would be on line by 1973, at a cost of \$65 million-\$75 million. By the time Shoreham was fully decommissioned on Oct. 12, 1994, it cost nearly \$6 billion - about 85 times higher than the original estimate – and destroyed LILCO. The intervening years were marked by astonishingly low worker productivity, design

¹⁰ Available at http://www.state.ny.us/governor/keydocs/0129071_speech.html

¹¹ Pierce, Jr., R.J. (2005). “Completing the Process of Restructuring the Electricity Market,” in *Wake Forest Law Review*. V.40, No.2, Summer 2005.

changes ordered by federal regulators, and extensive battles over evacuation plans. Though Shoreham never produced a kilowatt of commercial power, the agreement that shuttered the plant forever made ratepayers responsible for most of Shoreham's cost, saddling Long Island with some of the highest electric rates in the nation.¹²

- In 1972, the Public Service Company of New Hampshire (PSNH), applied for permission as a principal investor to build a two-unit nuclear plant at Seabrook, New Hampshire with a projected cost of \$900 million. Construction began in 1976, with an expected opening date in 1985. In 1979, the State of New Hampshire barred PSNH from passing the rising costs of construction on to ratepayers until the plant began operating. By 1983, the projected cost estimate spiraled to \$5.2 billion; when the cost rose to between \$9 billion and \$10 billion in 1984, one of the reactors was canceled and construction was halted after banks cut off the utility's credit. By 1988, with the cost of the single-reactor plant at \$5.2 billion, PSNH became the first utility in the United States to file for bankruptcy protection since the Great Depression.¹³

As a result of rising costs and such high profile, colossal investment failures by industry, the existing paradigm of natural, regulated monopoly came under fire.

Competition entered wholesale markets with the passage of the 1978 Public Utility Regulatory Policy Act (PURPA). PURPA established a new class of "unregulated" generators termed Qualifying Facilities, which could sell power to regulated utilities and be paid for the avoided costs of those utilities. Continuing on the success of PURPA, in 1992, Congress further opened the \$220 billion electricity industry to competition with the National Energy Policy Act, which allowed an even broader group of competitive power producers to compete for the sale of electricity to utilities. Four years later, FERC issued Order No. 888, which required utilities to "remove impediments to competition in wholesale trade and to bring more efficient, lower cost power to the nation's electricity customers."¹⁴ The requirement that electric transmission lines be accessible for all producers facilitated the states' restructuring of the electric power industry to allow customers direct access to retail power generation, and several states launched pilot programs allowing competition shortly thereafter.

Restructuring must be looked upon as an evolutionary process, through which an industry must go from a heavily regulated and static environment in which utility profit margins are virtually assured to one driven by dynamic market-based competitive forces. Transition between the two in any industry is highly complex and difficult in part

¹² Fagin, D. "Lights out at Shoreham: anti-nuclear activism spurs the closing of a new \$6 billion plant." Copyright 2007 by Newsday, Inc., available at <http://www.newsday.com/community/guide/lihistory/ny-history-hs9shore,0,563942.story>

¹³ *Newsday* (1988). "Chapter 11 for NH Utility: Seabrook debts force filing for bankruptcy protection." 1/29/88.

¹⁴ Federal Energy Regulatory Commission. *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*. Order No. 888, Final Rule; Summary p.1. Issued April 24, 1996. Available at <http://www.ferc.gov/legal/maj-ord-reg/land-docs/rm95-8-00v.txt>

because of the differing political and economic structures of a regulated industry versus a competitive one. In the former, important organizational decisions (e.g. pricing, profits, entry and exit and terms of doing business) are conducted largely by public officials, or regulators. The culture is monopolistic, and the role of the regulator is to assure reliability and reasonable energy prices for customers, while also providing a rate of return for shareholders. By contrast, the culture of the competitive industry is entrepreneurial, in which private shareholders make decisions and those decisions are made within the context of consumer satisfaction with regard to quality, innovative new products and services and price.¹⁵ From the outset, the key challenge has been to expand competition in the supply of retail electricity services in a way that preserves operating and investment efficiencies, but mitigates the price increases associated with the old regulated model.¹⁶

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In New York, the entity charged with guiding the industry through the transition phase has been the PSC. The PSC began restructuring of the State's electric industry in the mid-1990s to promote efficient energy services at just and reasonable rates while providing customers with greater choice, value and innovation.¹⁷ In so doing, the PSC set forth its expectations that competition was expected to produce downward pressure on prices, offer consumers new supply pricing options and services and provide more value-added services such as heating system and appliance maintenance and energy efficiency consulting.¹⁸ This unleashing of greater choice and innovation, the PSC postulated, would produce for New York's consumers better value for their energy dollars.¹⁹

Rather than impose a specific one-size-fits-all solution for electric restructuring across all of New York's electric distribution utility service territories, the PSC developed a comprehensive policy framework and worked with industry participants in each of New York's utility service territories to implement policy goals on a utility-by-utility basis. In 2004, the PSC issued its *Statement of Policy on Further Steps Toward Competition in Retail Energy Markets* ("Policy Statement").²⁰ In this Policy Statement, the PSC identified important steps to accelerate the development of retail competition in New York's electric markets, including the submission of retail access plans by each electric distribution utility and the implementation of "best practices" for fostering the

¹⁵ Foer, Albert A. (2002). "Electricity: Notes of the Transition Phase," *Loyola University Chicago Law Journal*. V. 33, Summer 2002.

¹⁶ Joskow, P.L. (1997). "Restructuring, Competition and Regulatory Reform in the U.S. Electricity Sector," in *The Journal of Economic Perspectives*. V.11, No.3, Summer 1997.

¹⁷ New York Public Service Commission, *Staff Report on the State of Competitive Energy Markets: Progress To Date And Future Opportunities* (March 3, 2006), hereinafter "PSC Staff Competition Report" p. 29.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ New York Public Service Commission Case No. 00-M-0504, *Statement of Policy on Further Steps Toward Competition in Retail Energy Markets* (Aug. 25, 2004).

availability of competitive choices for customers. These “best practices” included: ESCO referral programs, utility purchase of ESCO receivables, and the use of hourly-priced default service for large commercial and industrial customers. Many of the “best practices” identified in the PSC’s Policy Statement were implemented by subsequent PSC orders in 2005 and 2006.

Now, as a combination of rising fuel costs and tightening supply have placed upward pressure on the nominal price of energy everywhere, some advocacy groups and a number of elected officials in New York are publicly questioning whether the expected benefits of restructuring will ever be realized. Looking at nominal prices in New York since deregulation began, some parties have argued that New York’s consumers have not experienced the anticipated benefits of market-driven competition. Despite this perception, the average price of power in *real dollar terms* has in fact *declined* in those states that have restructured their markets, including New York, over the era of deregulation from 1997 to 2006. This gap between the perception perpetuated by retail competition’s opponents and reality suggests that power price trends are widely misunderstood, a misunderstanding that can lead to public misinformation and, more importantly, poor decision-making.²¹

Although some parties, focusing on the need for additional energy infrastructure, have suggested that New York’s utilities should enter into long-term procurement contracts with new generation, there could be detrimental consequences of such a drastic change in course. Not only could such an action seriously distort retail prices, thereby harming the current robust and sustainable retail market structures already implemented for medium-sized and large commercial and industrial (“C&I”) customers in New York, it would also dramatically impact that progressive market development for residential and small mass-market commercial customers who are only beginning to enjoy the benefits of retail electric competition. Moreover, such a singular focus on this design as a panacea for New York’s generation woes creates the real concerns that: (1) long-term contracts will deter market based solutions; and (2) in the meantime, the retail market that has worked so well for large C&I customers and holds great potential for smaller customers, will have been destroyed. This is the one policy scenario that the Spitzer Administration should work diligently to avoid.

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THE SUCCESSES OF NEW YORK’S ENERGY RESTRUCTURING POLICIES

It has now been a decade since the PSC embarked on the process to restructure of New York’s energy markets. Therefore, it is timely and appropriate to evaluate its success at this stage of market development. The following analysis will examine how restructuring has progressed in New York since 1996. In doing so, it will demonstrate the success of restructuring of energy markets. It produces two compelling conclusions: (1) the

²¹ Cambridge Energy Research Associates (CERA). *Beyond the Crossroads: The Future Direction of Power Industry Restructuring*.

competitive market is still evolving and needs continual evolution to achieve the Administration's goals; and (2) now is not the time to retreat to the regimented model of the past that failed to place downward pressure on consumer prices or increase the quality of customer service.

The evidence shows that although the transition to restructured energy markets in New York is incomplete, for sectors where the market is structured to allow for robust and sustainable retail competition, numerous competitive ESCOs have entered these markets and have invested in and provided needed infrastructure and customer-oriented products and services tailored to the customer's specific needs. The role and impact that ESCOs have played and continue to play in the development of the retail market cannot be understated. The choices that ESCOs are offering retail customers, regarding - the varying of pricing and service products, are meeting the goals of placing downward pressure on prices, increased efficiency, improved and advanced technology and environmental protection far more effectively than the regulated monopoly utilities can.

The success of New York's restructuring policies can be seen in the benefits they have brought to consumers:

- increased choice through value-added products and services and increased efficiency;
- downward pressure on prices; and
- environmental protection through conservation and demand response product offerings.

It must be noted at the outset that the extent to which this success has occurred is in large part a product of the retail market structure that has been permitted to develop in New York. In this regard, the Federal Competition Report is particularly instructive in its examination into whether retail competition in several states was meeting the goals of:

- lower electricity prices than under traditional cost of service regulation;
- better service and more options for customers;
- technological innovation and new products and services for consumers; and
- environmental improvements.²²

The Task Force concluded that retail competition met these goals only where the appropriate retail market structure was implemented and permitted to take hold.²³ In examining the status of retail competition of several states, including New York, the Task Force found that New York had developed a robust and sustainable retail market structure for commercial and industrial customers and, unlike most other states, had facilitated a structure to enable some residential customers to participate in and benefit from retail markets.²⁴

This begs the question as to what is the appropriate retail market structure that unlocks for customers the benefits of a robust and sustainable competitive retail market structure. That structure is one where customers are able to receive a price signal that enables them

²² Supra note 1, p. 6.

²³ Supra note 1, pp. 84-108.

²⁴ Supra note 1, pp. 6-7, 106-107.

to see their true costs of energy consumption and use this information to obtain the energy supply product that is best tailored to their own specified consumption needs. This price signal is conveyed best when the default service price – that is, the price customers would receive if they remained with the incumbent New York utility on default service rather than receive competitive service from an ESCO – is as close to market-reflective as practicable. With this price signal, customers can shop for and ESCOs can compete against one another to innovate and produce product offerings that are tailored to the customer’s specific needs.

This retail market structure has been implemented for large commercial and industrial customers through the Commission’s implementation of mandatory hourly-priced default service in 2006, and as a result these customers have seen the benefits of restructuring detailed in this analysis. In addition, smaller customers have experienced the benefits of retail competition, albeit to a lesser degree, as the Commission has implemented default service that partially relies on market-reflective default service prices as part of a portfolio mix with short-term and medium-term prices that are the product of hedging arrangements between the New York utilities and wholesale suppliers. However, because the Commission has prevented smaller customers from receiving clearer price signals, the benefits of retail competition have been slower to come for these customers, as evidenced by the fact that New York, despite all of the benefits already generated to date by retail competition, remains in a transition to restructuring especially for smaller customers.

Despite the conservative pace of restructuring for these residential and smaller commercial customer sectors, an examination of the current situation demonstrates that the expectations of retail electric restructuring are being met. Competition can be counted on to deliver much more dramatic customer, economic and environmental benefits as public policy allows the market structure to continue to mature.

Increased Consumer Choice

Even though the competitive retail markets are still evolving, one recent survey found New York to not only be a national leader with regard to electric choice but also a market poised for significant growth in the residential customers sector due in large part to operational improvements and Commission programs such as ESCO referrals and Purchase of Receivables (“POR”).²⁵ Clearly great strides have been made that provide a glimpse of the increased benefits as the market structure evolves to allow for more vigorous competition. The PSC’s commitment to “retail access plans” – programs that make it easier for residential and small businesses to shop for power and understand choice – has revolutionized how small businesses are able to compare prices and test the market.

Increased consumer choice can be measured in three ways: the number of Energy Service Companies serving consumers; new technologies that provide environmentally clean energy alternatives and/or encourage energy efficiency and consumer conservation; and

²⁵ See KEMA 2006 Restructuring Review, pp. 1-5, 1-19, 1-32 and 2-126 through 2-137

migration rates of consumers from their default choice of the utility company to an Energy Service Company.

Energy Service Companies

An Energy Service Company (ESCO) is a non-utility business that primarily provides gas or electric commodity and/or installs energy efficient and other demand-side management measures in homes and businesses. ESCOs play a leading role in the PSC's vision of deregulation as independent energy suppliers while utilities are still regulated for the transmission and delivery of the commodity to the consumer. The ESCO community is comprised of power aggregators, marketers and brokers, who meet the requirements of and are monitored by the PSC and subject to the business laws of the State of New York. Where allowed, they are able to offer specifically tailored products – based on physical and financial instruments designed to match their customers' needs as buyers with the wholesale market as sellers – to suit the needs of particular customers.

ESCO participation has increased significantly, with nearly a third more ESCOs providing service to New York consumers by the end of 2005 than there were in 2003. There are currently about 100 approved ESCOs in New York, with 75 providing gas and/or electricity service to customers.²⁶ Indeed, for residential customers, Texas and New York are the two states in which more than just a handful of suppliers serve residential customers. In Texas, residential customers have approximately 15 suppliers from which to choose.²⁷ At least 7 ESCOs are serving residential electric customers and at least 14 are serving non-residential electric customers in each major New York utility service area.²⁸

As anticipated, ESCOs provide an array of innovative value-added services tailored to meet customers' needs. This allows ESCOs to distinguish themselves in ways other than price, and leads to the greater benefits for consumers and society as a whole than monopoly-based service. Many consumers are influenced in their choice by price; however in competitive markets choices other than price are also sought by consumers. Many consumers are willing to pay more for a product if they know their supplier is buying renewable energy and not contributing to the burning of fossil fuels. Other consumers look for a company that best models the corporate behavior they desire. Products such as load control, energy efficiency assistance, and telephone service are bundled with energy. In several service territories, ESCOs are separately offering optional home furnace cleaning and maintenance contracts and at least one ESCO offers this service bundled with its natural gas commodity. Others offer fixed pricing, which allows customers to lock into a fixed price for an extended period of time, or flexible

²⁶ See *Governing Competitive Retail Energy Markets Retail Energy Markets --A New York Status Report*. Illinois Commerce Commission Electric Policy Meeting Chicago, IL. October 2, 2006, at <http://www.icc.illinois.gov/docs/tc/061002tcCompCerniglia.pdf>.

²⁷ Texas Public Utilities Commission, *Texas Electric Choice Compare Offers from Your Local Electric Providers*, available at <http://www.powertochoose.org/default.asp>, cited in *Report to Congress on Competition in the Wholesale and Retail Markets for Electric Energy*, by The Electric Energy Market Competition Task Force, June 5, 2006. p.80.

²⁸ PSC Staff Competition Report, p.38.

pricing that is driven by short-term fluctuations in the market price, depending on how risk averse or tolerant the consumer chooses to be.²⁹

Innovation

Nowhere are the potential benefits of competition greater than in the development of new technologies that will provide consumers with the tools they need to make rational choices in their energy use:

Combined Heat and Power

Combined heat and power (CHP), also known as co-generation, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. CHP is not a specific technology but an application of technologies to meet an energy user's needs. CHP systems achieve typical effective electric efficiencies of 50% to 70% — a dramatic improvement over the average efficiency of separate heat and power. Since CHP is highly efficient, it reduces traditional air pollutants and carbon dioxide, the leading greenhouse gas associated with climate change, as well.³⁰

- Employees on the shop floor of Harbec Plastics Inc., an injection molding company in Ontario, New York, suffered in temperatures above 100 degrees Fahrenheit during the summer months. Since the provision of air conditioning using electricity from the grid was cost prohibitive, an alternate solution had to be found that would provide cooling in an economically viable and environment-friendly way. Harbec installed a 250 kilowatt (kW) wind turbine and twenty-five micro-turbines (combined heat and power) which generate electricity and provide the heating and cooling needs for the plant.

The project saves the company \$165,000 per year in energy costs and reduced carbon dioxide emissions by 90 percent due to use of renewable and alternate energy sources. Harbec is able to predict 20 percent of electricity needs at least 25 years into the future, and has the option of using alternative renewable fuels (e.g. bio-diesel, hydrogen) to run the micro-turbines.³¹

Thermal Storage

Thermal storage is an ice storage based air-conditioning system that shifts the electrical load from daytime to nighttime when electricity is more plentiful, less expensive and generated more efficiently. In addition, the technology reduces consumption and demand via a more efficient low flow/low temp chilled water operation, and facilitates the transition between free cooling and mechanical cooling. Thermal storage systems have been recognized for improving the reliability of the electric grid by permanently shifting peak cooling loads from on-peak to off-peak.

²⁹ Supra note 17, p.40.

³⁰ For more on CHP, see the Environmental Protection Agency website at http://www.epa.gov/chp/what_is_chp.htm

³¹ See the Center for Environmental Information at <http://www.ceinfo.org/rqbn/details.php?CaseStudyID=1>

- In 2006, Credit Suisse, a leading global investment banking and financial services firm, installed New York City’s largest thermal storage based air-conditioning system at its City headquarters, which delivers dramatic energy savings. New York State Energy Research and Development Authority (NYSERDA) officials praised company officials for their commitment to energy efficiency and the environment. The system will greatly lower the facility’s peak energy usage and overall electric while delivering improved site resiliency. In addition saving energy, the environmental benefits from this thermal storage system are equivalent to taking 223 cars off the streets or planting 1.9 million acres of trees to absorb the carbon dioxide caused by electrical usage for one year.
- The same year, Morgan Stanley also installed a similar system at its facility in Purchase, New York. Environmental benefits for that system are equivalent to the company planting 1.5 million acres of trees or removing 271 cars from Westchester County roads each year.³²

Advanced Metering

The term “Advanced Metering” is used to mean an electronic meter that not only has the ability to read and store consumption information at predetermined intervals, but can also transmit this information electronically. Advanced Metering allows for automated meter reading (AMR), which eliminates the need for site visits by utility personnel. This not only saves money by the utility, it also provides the opportunity to implement time of use rates, and provides signals to customers who can then modify their energy-use behavior.³³ Many large C&I customers have advanced meters. By having access to their consumption information these customers have been able to take control of their energy use. ESCOs can obtain access to this data and develop products designed to meet the specific consumption needs of these customers.

In Texas, at least one utility has announced plans to install advanced meters in residential homes. With this announcement, retail suppliers in Texas are now developing products aimed at maximizing this new level of information about residential consumption. As the retail competitive market for residential and small commercial customers develops, similar types of product offerings are likely to develop for these customers.

³² “Credit Suisse Recognized by New York State and New York City for Energy Conservation,” (12/31/06) and “Morgan Stanley uses innovative ice storage system to reduce its electricity use.” (6/27/06). Press releases from New York State Energy Research and Development Authority.

³³ New York State is also furthering the use of advanced meters through NYSERDA’s Residential Comprehensive Energy Management Services Program (CEM). This program provides incentives to help fund a portion of the cost of installing advanced metering and energy management systems in both single-family dwellings and multifamily buildings. While this program is targeted at the residential sector in total, to date there are eight low income buildings representing 905 units participating in the program.

Real Time Pricing

Real Time Pricing (RTP) is the instantaneous pricing of electricity based on the cost of the electricity at the time it is used by the customer. RTP rates can vary over a wide range and are typically very high when system demand is high (e.g., on a hot, summer, weekday afternoon), and very low when system demand is low. Real-time rates differ from time-of-use rates in that they are based on actual (rather than forecasted) prices that may fluctuate frequently during a day and are weather-sensitive rather than varying with a set schedule. RTP is, in essence, market-reflective pricing that forms the building block for a retail market structure that can produce the benefits sought by the PSC in restructuring New York's electric industry because it sends the most accurate price signal to customers enabling them to make rational decisions about the way they use energy.

RTP adoption improves efficiency, reduces the variance and average of wholesale prices, and reduces all retail rates.³⁴ Real-time rates have been shown to reduce demand and wholesale prices during peak hours and increase demand and prices during off-peak hours, even when the amount of electricity involved is relatively small.³⁵

The largest consumers in New York receive real time prices and these customers have benefited from a robust competitive market and myriad of product and service offerings to meet their needs. As more customers receive market-reflective price signals, they too will be better able to manage their electricity consumption by choosing the products that best meet their needs.³⁶

Consumer Migration

The availability of choice has proved successful. This includes not only a significant percentage of residential customers, but many commercial and industrial customers as well.³⁷ Nationally, the migration of residential customers switching from the traditional service to an alternative competitive supplier is the greatest in those territories with more competitive suppliers.³⁸

In New York, consumer migration rates have increased dramatically in the past two years, demonstrating that consumers are recognizing the benefits of choosing their energy supplier. As of December 2006, the total number of customer accounts who have migrated to a non-utility, alternative supplier was 1,236,617 - 752,092 electric customers, or 11.6% of the total eligible accounts, and 461,335 gas customers, or about 10% (Chart 1).³⁹

³⁴ Holland, P. and Mansur, E. (2005). *The Distributional and Environmental Effects of Time-Varying Prices in Competitive Electricity Markets*. University of California Energy Institute, Center for the Study of Energy Markets. 5/17/05. Available at <http://repositories.cdlib.org/ucei/csem/CSEMWP-143/>

³⁵ Center for Energy, Economic and Environmental Policy (2005). *Assessment of Customer Response to Real Time Pricing: Task 2: Wholesale Market Modeling of New Jersey and PJM*. Edward J. Bloustein School of Planning and Public Policy, Rutgers University. 11/11/05.

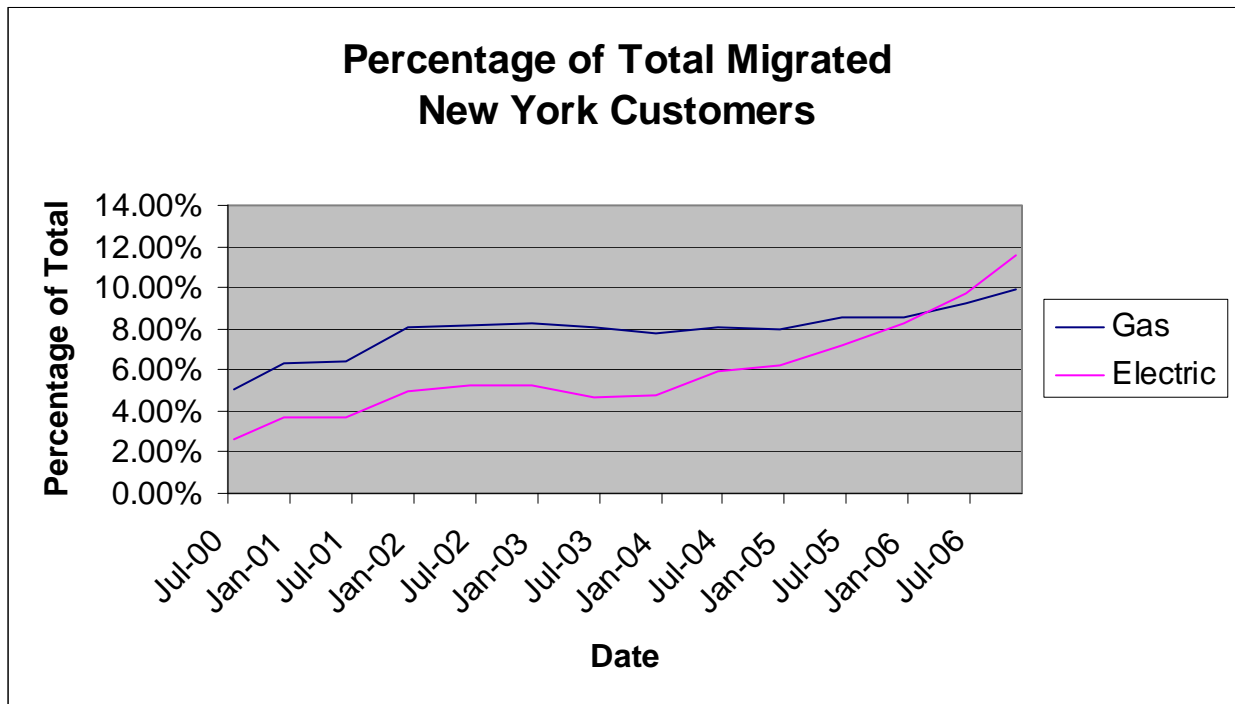
³⁶ See McKinsey & Company (2001). *The Benefits of Demand-Side Management and Dynamic Pricing Programs*. 5/1/01.

³⁷ *Supra*, note 22.

³⁸ Federal Competition Report, pp. 93-95.

³⁹ New York State Public Service Commission at <http://www.energyguide.com/finder/NYFinder.asp?referrerid=209&sid=481>

Chart 1



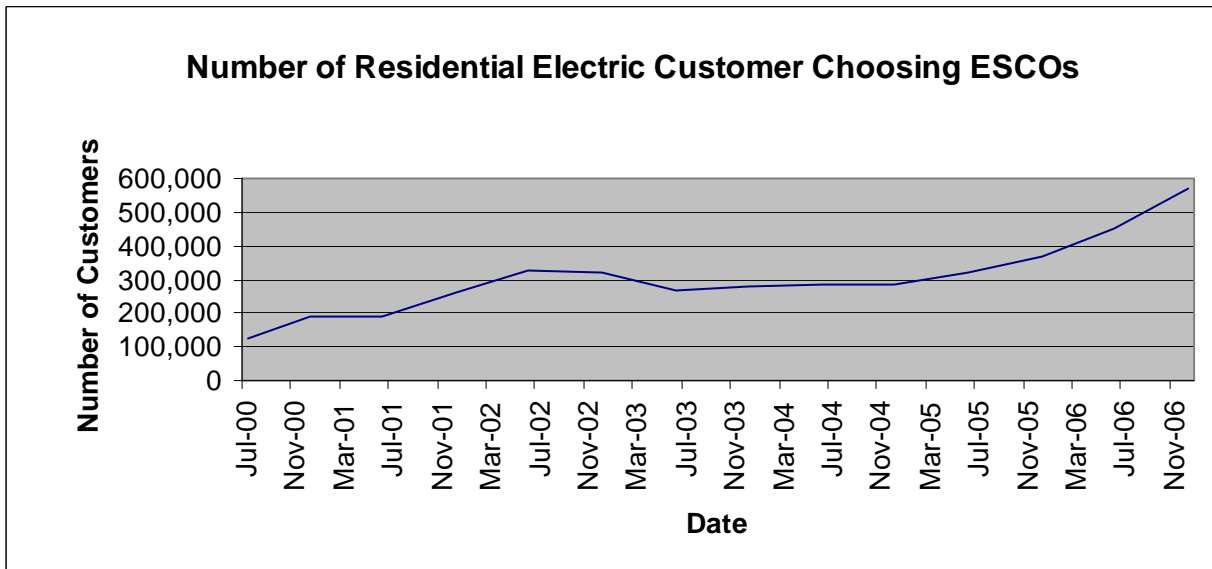
Source: New York Public Service Commission data

Evidence shows a significantly greater migration among industrial and commercial customers than among residential consumers. About 74% of the large commercial/industrial, 49% of the small commercial, but only 11% of the residential load is being served by ESCOs.

Residential migration, however, has accelerated in the past two years. After reaching a high of 323,785 customers in June of 2002, the total number of residential customers dropped significantly over the next year, and did not recover completely until December of 2005. From a low of 264,534 in June of 2003 to December 2006, the number of residential customers who migrated to ESCO service has increased 95% (Chart 2). The Task Force has confirmed this finding in the Federal Competition Report, finding that “New York [has] more options for residential customers...[in part, because] between six and nine [competitive] suppliers offer services to residential customers in each service territory.”⁴⁰ Furthermore, migration statistics have varied considerably depending on how much the local utility embraces competitive markets and whether they have adopted market rules that facilitate retail choice. For example, Orange and Rockland Utilities, Inc., which has been viewed as a proactive utility within New York for developing competitive retail energy markets, has achieved residential migration rates that are 2.5 and 3.8 times the state-wide averages for electric and gas customers respectively.

⁴⁰ Supra note 1, p. 94.

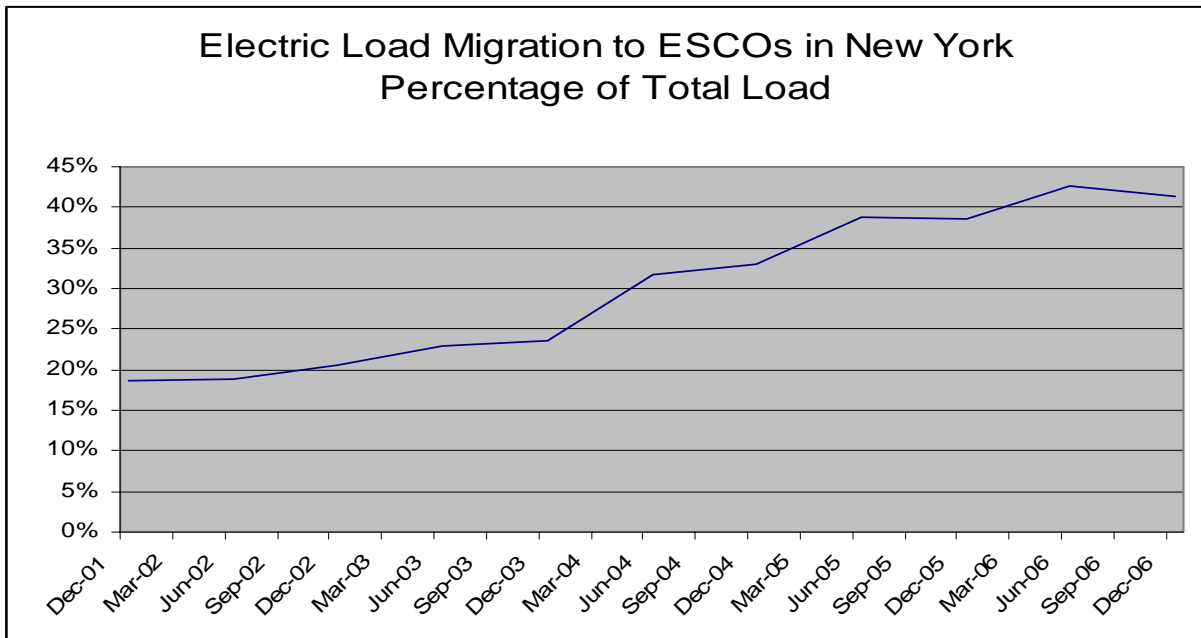
Chart 2



Source: NY Public Service Commission data

In the aggregate, 42% of all electricity used in the state is now being supplied through ESCOs, up from 19% at the end of 2001 (Chart 3).⁴¹

Chart 3



Source: New York State Public Service Commission

⁴¹ November 8, 2006 Session of the PSC, minutes.

Downward Pressure on Prices

There are essentially three ways to test whether deregulation has been successful in applying downward pressure on prices, thereby keeping them in check:

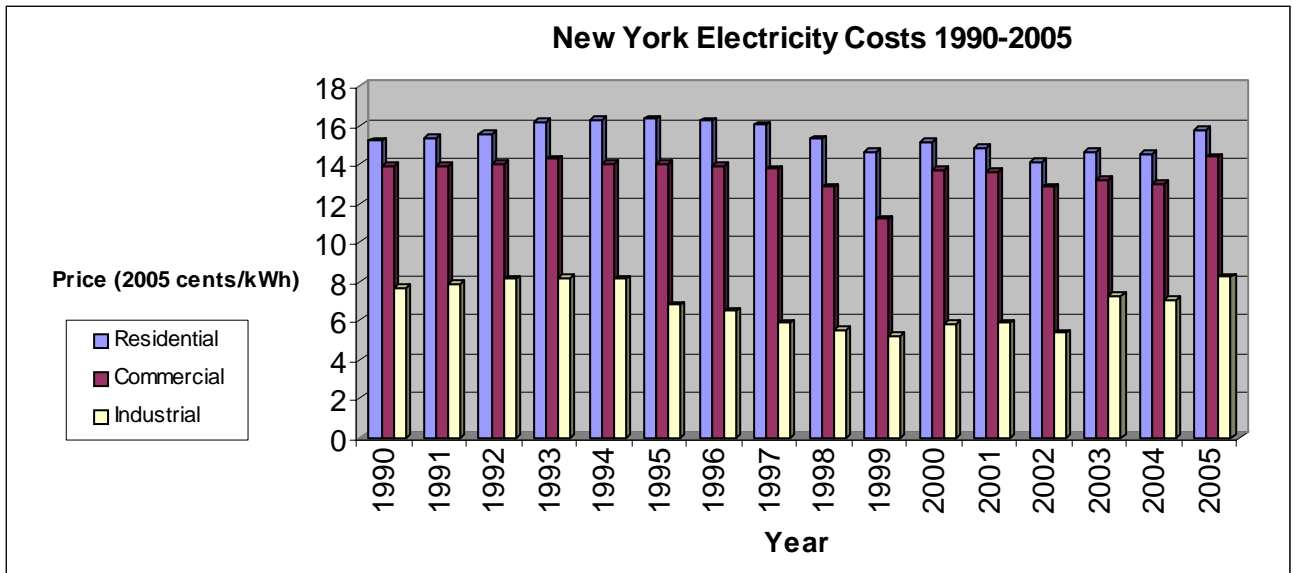
- Lower Real Prices: are prices lower than they were under the pre-1996, regulated regime?
- Smaller Comparative Price Increases: have prices in areas that have implemented competitive markets risen less than in areas that have maintained regulated monopolies?
- Lower Relative Prices: are prices lower now in deregulated areas than they would have been had deregulation not taken place?

In each instance, there is significant evidence to show that competitive markets have performed better than regulated monopoly structures.

Lower Real Prices

Contrary to the misperception that prices have increased since restructuring was undertaken in New York, an examination of EIA data demonstrates that competitive markets have held real prices down in all categories (Chart 4).

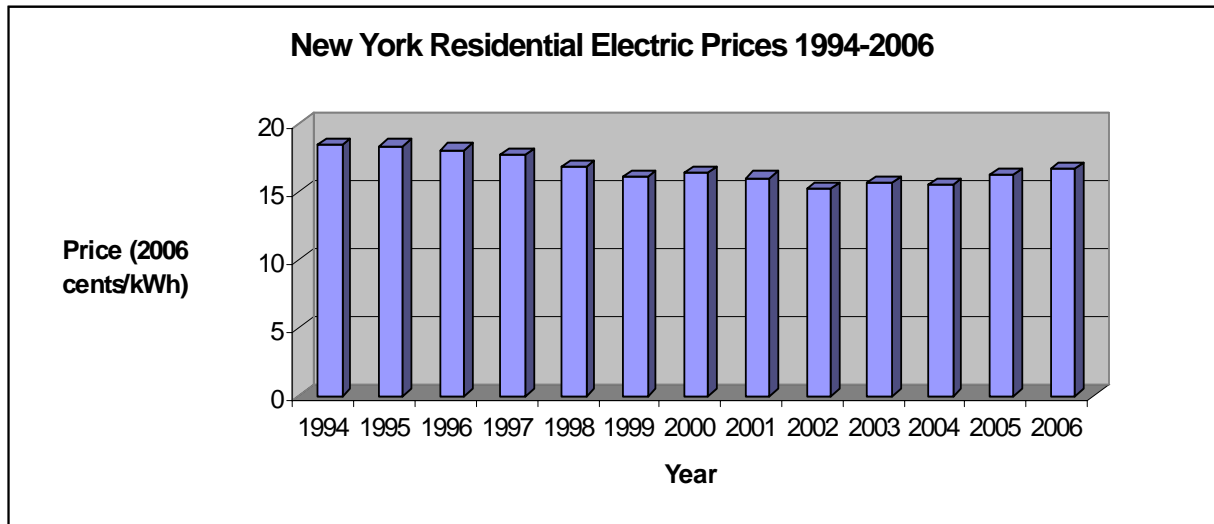
Chart 4



Source: EIA; http://www.eia.doe.gov/cneaf/electricity/st_profiles/sept08ny.xls

The decline in real prices is particularly significant for residential customers from a high of 18.44 cents/kWh in 1994, on the eve of New York's deregulation endeavor, to 16.69 cents/kWh in 2006 (constant 2006 dollars) (Chart 5). Even with the recent rise in prices over the past two years, real residential electric prices in New York are considerably lower than they were prior to when restructuring commenced.

Chart 5



Source: Energy Information Administration

These sector-wide savings are tangibly demonstrated by the savings reported from the following customers:

- In 1997, the North Syracuse School District contracted with an ESCO (Noresco) to convert the Cicero-North Syracuse High School from electric to gas heat with a type of air conditioner known as a gas chiller. Software was also installed to regulate temperatures at different times during the day. In 2000, the District entered a similar contract with the company when it installed new lighting, energy efficient motors, gas kitchen appliances, new gas boilers, and new windows and doors in many of its buildings. Again, Noresco guaranteed a savings of \$182,810 per year, with the District taking any savings beyond that. At the end of 2005, the District reported a total savings of \$630,000 beyond its obligations to Noresco for the fiscal year April 1994 to March 1995.⁴²
- In 2006, Westchester Presbyterian Hospital in White Plains worked with ConEdison Solutions and the New York State Energy Research and Development Authority to put a conservation program in place with the expectation of saving more than \$200,000 a year.⁴³
- The Rome Chamber of Commerce reports that its members saved \$180,815 on energy costs in 2004 from their participation in the Integrys electricity savings program. Chamber members see an estimated annual savings of 5-20% on their utility rates.⁴⁴
- In 2006, the Batavia City Council entered into an energy performance contract with Johnson Controls, Inc. which involved investment in conservation-oriented

⁴² Reaves, M. (2005). "Energy service company brings big savings to district; costs have been reduced \$600,000 through earlier efforts," *The Post-Standard (Syracuse, NY)*, 12/29/05: p14.

⁴³ Drury, A. (2006). "Con Edison unit names new leader," *The Journal News (Westchester County)*, 6/22/06.

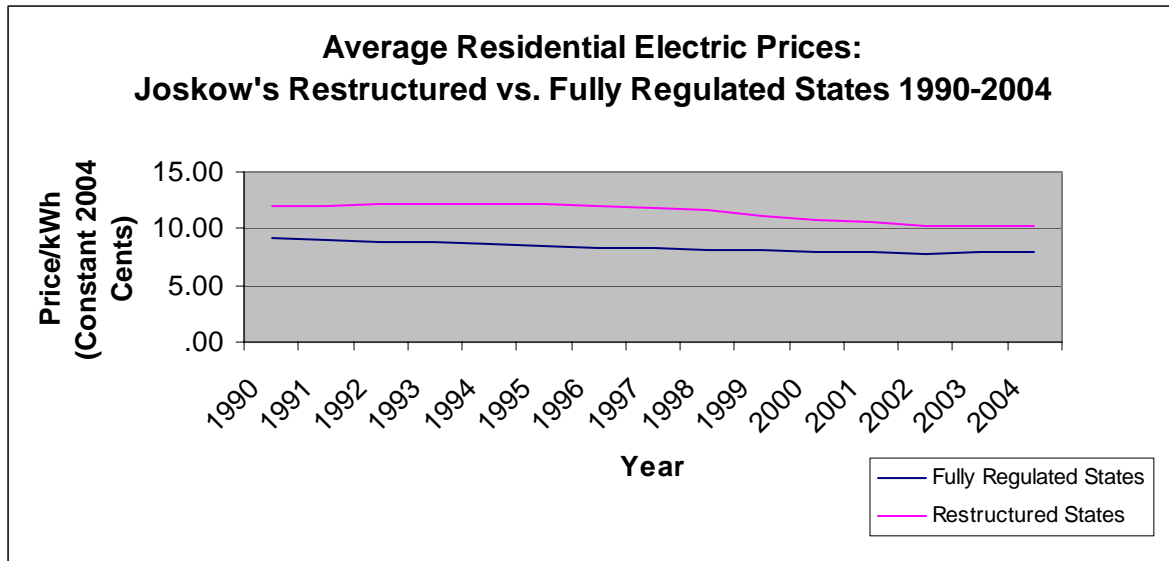
⁴⁴ Rome, New York Chamber of Commerce at <http://www.romechamber.com>

equipment. The contract projected annual energy and operational savings of \$68,000 per year.⁴⁵

Smaller Comparative Price Increases

One of the most comprehensive studies to date regarding comparative electricity prices in constant dollars found that, with the exception of Texas, the states that have embarked on electric restructuring experienced larger decreases than states that have remained under a regulated monopoly structure.⁴⁶ Using that study’s categorization scheme of deregulated states, a further examination of EIA data confirms those findings. Taking the average real price trends from 1990 to 2004 in the study’s cited restructured states and comparing them to the average real price trends in “fully regulated” states for the same period, restructured states saw real price reductions for the period of 14.1%, compared with real price reductions of 13.2% for states that still have regulated monopoly structures (Chart 6).⁴⁷

Chart 6



Source: EIA Data

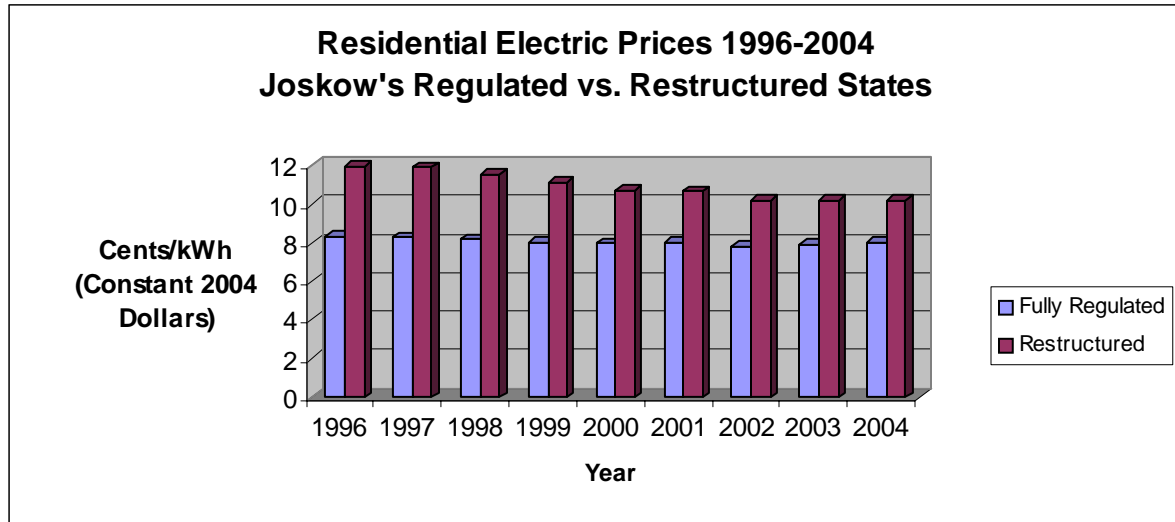
Indeed, from the mid-1990s, when the Commission undertook deregulation in New York, to 2004, restructured states have seen an average 15% decrease in residential electric prices, while fully regulated states have seen an average decrease of only 4.1% (Chart 7).

⁴⁵ Beck, J. (2006). “City aims to cut energy costs: Inks agreement to invest in more conservation-oriented equipment,” *Daily News, The (Batavia, NY)*. 3/8/06.

⁴⁶ Joskow, P.L. (2005). *Markets for Power: An Interim Assessment*. Center for Energy and Environmental Policy Research. August, 2005. p.36.

⁴⁷ Calculated from AEI data. Completely deregulated states are Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Texas and Virginia; regulated monopoly states are Alabama, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Washington, Wisconsin and Wyoming. See Appendix C.

Chart 7



Source: EIA Data

Lower Relative Prices

A study of two of the two mid-Atlantic regional electric trading markets – the New York Independent System Operator (NYISO) and Pennsylvania-New Jersey-Maryland (PJM) Interconnection – found that, while prices in the NYISO and PJM area increased from 1998 to 2004, they did not increase as much as they would have had deregulation not taken place. Prices have risen in general since 1997 because the impact of rising fuel prices that cannot be avoided through changes in market structure. However, in comparing actual price increases with models that projected price behavior had deregulation not taken place, that aggregate savings in the NYISO and PJM regions was \$1.3 billion per year for the time period.⁴⁸

In viewing the nominal price increases over the past few years, consumers, the media and, consequently, some policy-makers have focused far too much on short-term trends. Just as investors should not focus on one day's change in the stock market, short-term price increases brought about by unprecedented increases in the price of fossil fuels do not negate the benefits of the competitive market. Fuel prices have recently pushed up rates everywhere, whether in states still under the traditional regulated monopoly regime or in restructured states. In 2005, oil prices increased by 135% and natural gas prices increased by 210%. If restructured states had used the fuel-cost adjustment pass-throughs common in states with traditional regulated monopoly rate regulation, as downstate utilities commonly did, rates would have been 15% higher than the rates produced under restructuring.⁴⁹

Just as investors should not focus on one day's change in the stock market, short-term price increases brought about by unprecedented increases in the price of fossil fuels do not negate the benefits of the competitive market.

⁴⁸ Harvey, S.M., McConihe, B.M. and Pope, S.L. (2006). *Analysis of the Impact of Coordinated Electricity Markets on Consumer Electricity Charges*. LEGC, LLC. November, 2006.

⁴⁹ Alexrod, H.J., DeRamus, D.W. and Cain, C. (2006). "The Fallacy of High Prices," in *Public Utilities Fortnightly*. November, 2006.

Continued Environmental Protection

One of the most important successes of electric industry restructuring is the creation of a market for renewable energy generation, or “green power,” which satisfies both the environmental yearnings of its purchasers and the need of its sellers to differentiate their product offerings.⁵⁰ ESCOs are uniquely positioned to offer consumers the opportunity to play a personal role in protecting the environment. ESCOs can provide service packages that typically include financing, installation, and maintenance of energy-saving capital improvements. Services are provided through performance contracts, which guarantee that payments will not exceed energy savings.⁵¹

As consumers become more sophisticated in evaluating purchasing choices in an expanding competitive electric market, the ability to choose energy produced from renewable energy sources has become increasingly important. Just as conservation-conscious consumers are weighing factors other than price when they purchase hybrid vehicles, so to, where the market structure allows for competition, options in the energy marketplace offer consumers opportunities to purchase environment friendly energy.

A great deal of toxic air pollution can be avoided by shifting some of our electricity needs to renewable power sources such as wind, geothermal, solar and biomass. Several ESCOs offer the choice of green energy options for customers that want the opportunity to select from renewable energy resources that protect the environment and expand energy options. As more ESCOs enter the market and competitive markets continue to expand, the trend for specialized products will continue to grow. The benefits of this choice are potentially enormous:

- For each kilowatt-hour of electricity produced from renewable electricity sources, businesses can prevent approximately one pound of CO₂ from going into the environment.
- A large grocery store could avoid putting over one million pounds of CO₂ into the atmosphere each year by purchasing one third of its electricity requirements from wind, solar or other renewable power sources.
- If just 10 percent of New York’s households purchased Green Power in conjunction with their electricity supply, it would prevent nearly three billion pounds of carbon dioxide, 13 million pounds of sulfur dioxide, and nearly four million pounds of nitrogen oxides from getting into our air each year.⁵²

Perhaps no better example of the combination of savings and environmental responsibility exists than with Plainville Turkey Farms, Inc., in Plainville, New York. In 2003, Plainville Farms, producers of all-natural turkey products, signed with Community Energy to purchase wind-generated energy for its operations. The farm buys 708,000 kWhs of wind energy, accounting for 100% of the electricity required to grow its turkeys.

ESCOs are uniquely positioned to offer consumers the opportunity to play a personal role in protecting the environment.

⁵⁰ Reed, G. and Houston, A.H. *Status of US Market for Green Power*

⁵¹ http://www.greenbiz.com/toolbox/essentials_third.cfm?LinkAdvID=8556

⁵² Con Edison, available at <http://www.poweryourway.com/pages/greenpower.pdf>

The associated environmental benefits are equal to not releasing 708,000 pounds of carbon dioxide, 5,430 pounds of sulfur dioxide, and 2,138 pounds of nitrous oxides into the atmosphere, which can be equated to planting over 74,000 trees or taking 98 cars off the road each year.⁵³

To help all consumers identify green energy suppliers, the PSC has an Environmental Disclosure Label Program, which publishes the fuel source and air emission for each ESCO serving New York customers. Environmental Disclosure Labels allow consumers to compare and make choices based on the nature of power generation.⁵⁴

CONCLUSION

In its opening paragraph, this White Paper outlined criteria by which the success of restructuring the energy industry in New York should be judged. Those criteria included increased supply choices through value-added products and services; downward pressure on prices; enhanced price transparency for all consumers; technological innovation and new products and services; and environmental improvements through conservation and demand response. Through qualitative and quantitative measurements, using academic and trade journals, government agency resources, independently constructed industry analyses and EIA data, each of the criteria was examined. Though the restructuring effort is not yet complete, both the quantitative and qualitative data firmly indicate that the criteria have so far been successfully met.

By all measurements, where the PSC has implemented a retail market structure that enables customers to know their true costs of consumption through market-reflective price signals and enables ESCOs to use this information to develop a variety of product offerings tailored specifically to the customer's needs, the benefits of retail competition have been realized. That is, downward pressure has been applied to energy prices, customer choice has increased, and environmental, reliability, and consumer protection benefits have continued, all while creating economic development across the state.

However, for those consumer sectors where this retail market structure has not been implemented, these benefits have been slower in coming, leaving retail competition open to criticism particularly from those sectors who have sought to erect roadblocks to restructuring every step of the way over the past decade. Nevertheless, this analysis has demonstrated that New York is on the verge of a new era of vibrant competition for residential and smaller commercial customers if the present retail market structure is allowed to continue and to expand.

Lower energy prices brought about by the continued downward pressure that robust and sustainable retail competition structures can provide will attract new business to New York while at the same time retain businesses already in New York, and help them expand their operations and create jobs. Emerging new technologies will allow ESCOs to offer commercial and residential consumers rational choices that were unimaginable just a few years ago – choices that will result in cleaner air, lowered dependence on imported energy and a more competitive economy on the global stage.

⁵³ More information available at <http://www.plainvillefarms.com>.

⁵⁴ Available at <http://www3.dps.state.ny.us/e/energylabel.nsf/>.

These results should serve as a thoughtful and positive development to policy-makers in both the Executive Branch and the State Legislature who may view nominal prices as an indication that retail competition has not produced benefits for New York's consumers. On the contrary, New York has seen declining real energy prices and an increasingly vibrant, stable competitive retail market. It is doing better than most other states that have undertaken restructuring, and outperformed those states that have yet to embark on restructuring.

It is therefore imperative for the Spitzer Administration to continue to implement policies that will improve the existing retail market structure for residential and small commercial customers that will enable these customers to further enjoy the benefits of retail competition envisioned by the PSC. The Administration is undertaking to bring the benefits of competition in other vital public policy areas such as education; it should similarly work toward unlocking the undisputed benefits of retail electricity competition for New York's residents and small businesses.

Simultaneously, the Administration should be reluctant to even entertain policies – such as a default service based on long-term multi-year generation procurement contracts -- that will move customers away from their ability to receive market-reflective price signals that will unlock for them the benefits of retail competition. As discussed in great detail in the Federal Competition Report, the ability of retail competition to remain robust and sustainable and fulfill all of the goals of deregulation is directly dependent upon the retail market structure that is permitted to operate.

A grave concern arises when utilities provide a long-term fixed-price. Not only would such an approach harm the successful retail market structures already in place in the larger customer sectors and fatally arrest the market's continued development in the smaller customer sectors, but it would shift significant risks back to captive ratepayers and expose them to future sources of stranded costs. Specifically, this structure enables utilities to draw upon their regulated transmission and distribution (T&D) customer rate base to shield customers from the market-reflective price signals that serve as the building blocks of the competitive (i.e., non-T&D) retail market.

In addition, while such policies have been proposed as a mechanism to attract investment in new generation, they can also weaken a utility's balance sheet and, by tying up capital and credit lines, either impede or make it more expensive for a utility to invest in its transmission and distribution system.⁵⁵ Ultimately, efforts to re-institute cost of service regulation will fail to benefit New York's consumers and make New York's economy less competitive for the ESCO industry and the over 1.3 million customers – ranging from residential consumers to Fortune 100 companies – served by the competitive retail electric industry. In implementing a forward-looking energy policy, New York should seek ways to address existing problems that incorporates retail competition and the many irrefutable benefits it provides.

⁵⁵ See April 3, 2007 publication by Standard & Poor's "Re-Regulation of U.S. Electric Utilities: The Toothpaste Challenge"