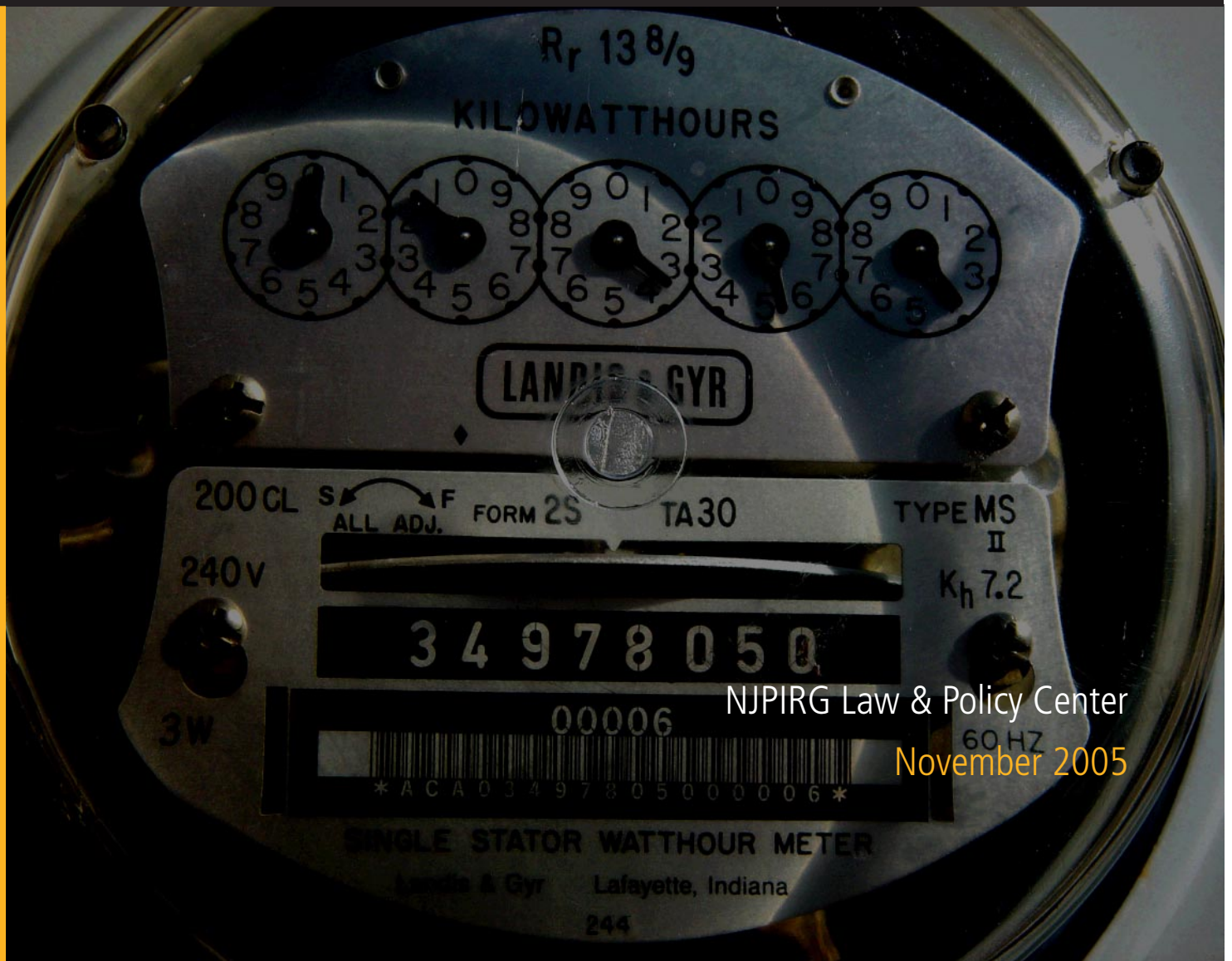


Consolidation of Power

**How Exelon's Bid to Acquire PSEG
Could Raise Rates, Reduce Reliability,
and Risk Public Safety**



NJPIRG Law & Policy Center
November 2005

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NJPIRG Law & Policy Center

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Table of Contents

Executive Summary	4
Introduction	9
The Takeover Would Increase Exelon’s Market Power	11
The Takeover Could Threaten The Viability of New Jersey’s Electricity Auction, Leading to Higher Rates	18
Exelon’s Cost-Cutting Measures Could Reduce Electric System Reliability and Quality of Service	22
Exelon’s Business Strategy Depends on Increasing the Output of Nuclear Power Plants, Risking Public Safety	25
New Jersey Regulators Would Lose the Power to Protect Consumers from Risky Investment Decisions	30
Concessions Will Not Solve the Long-Term Problems Inherent in the Takeover	33
New Jersey Regulators Should Reject the Proposed Takeover	37
Appendix	38
Consumer Principles for the Electric System	38
A Note On Electricity Units	40
Notes	41

Executive Summary

On February 4, 2005, Chicago-based Exelon Corporation requested formal permission from New Jersey regulators to acquire Public Service Enterprise Group (PSEG), the last remaining New Jersey-based energy company that hasn't been taken over by a large out-of-state corporation.

As the voice of New Jersey's electricity consumers, the state Board of Public Utilities should reject Exelon's proposal. The takeover would increase the monopolistic tendencies of the electricity market, threaten the reliability of electric service, increase risks to public safety, and reduce the ability of state regulators to defend the interests of electricity customers in New Jersey, leading to higher costs and poorer service.

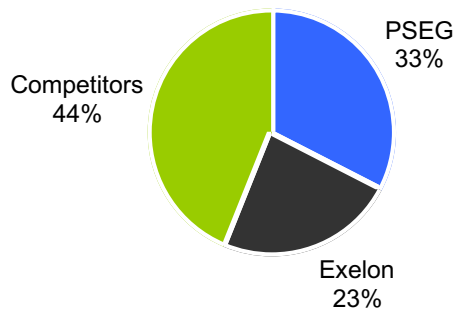
The takeover would increase Exelon's market power.

- If approved, the takeover would create the largest electric utility company in the country, with \$79 billion in assets, 9 million customer accounts and business operations in

electricity generation, distribution and marketing, plus natural gas supply and delivery. The new Exelon would:

- o control over half of the generating capacity in the regional electricity market, PJM-East (See Figure ES-1);
 - o operate the nation's largest power marketing business with 6.5 percent of national market share; and
 - o own 40 percent of firm natural gas supply capacity in the region stretching from Philadelphia to northern New Jersey—where gas-fired generators often set the price of electricity.
- Because of its large size and wide scope, the decisions of the company would be extremely influential in determining the nature, quality, and price of electric service for customers across New Jersey, the Mid-Atlantic and the Midwest.

**Figure ES-1:
Exelon Would Control 56 Percent
of Capacity in PJM-East**

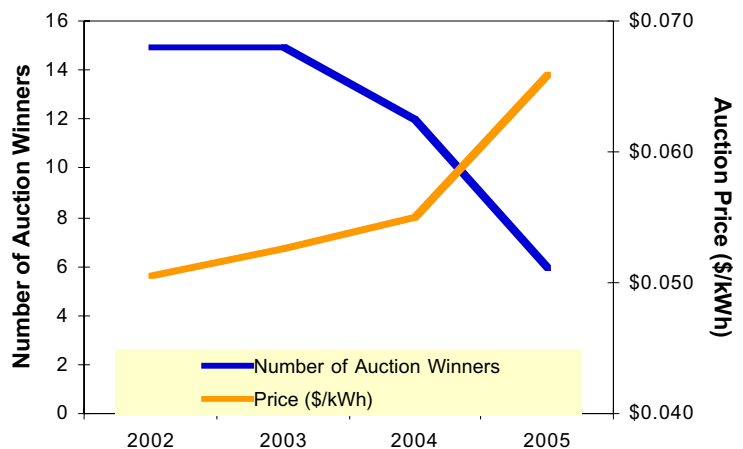


The takeover could threaten the viability of New Jersey’s electricity auction, potentially leading to higher rates.

- New Jersey depends on vigorous competition between electricity suppliers at a bulk auction to hold down electricity rates. However, the number of winners at the auction has declined almost two-thirds in the last two years, from 15 to six corporations. At the same time, the fixed price for electricity resulting from the auction has risen 19 percent. (See Figure ES-2).
- While other factors, including fuel costs, account for part of the cost increase, the percentage of supply contracts going to a single bidder has risen as well. In the PSE&G service territory, the maximum number of bids won by a single bidder increased from 21 percent in 2002 to 36 percent in 2004. This pattern follows a national trend of declining numbers of participants able to compete in the electricity market in a meaningful way.
- PSEG officials have stated publicly that PSEG has provided, directly or indirectly, at least 75 percent of the electricity supply at the auction.

- Further reducing the number of competitors would make New Jersey’s market look more like the dysfunctional power markets in some Midwestern states. For example:
 - o Illinois is working to set up a basic generation service auction modeled after the process in New Jersey. However, Exelon is the only generating company that appears prepared to participate in the auction for its affiliate utility, Commonwealth Edison—putting it in position to dominate the process.
 - o A large player in the Ohio power market recently refused to participate in an auction to supply generation service, causing the auction to fail outright. As a result, consumers in Toledo must now pay \$2 billion in unscheduled “rate stabilization” fees over the next several years.
 - o With fewer effective competitors, New Jersey’s auction system could produce similarly disappointing results, with New Jersey consumers paying the price.

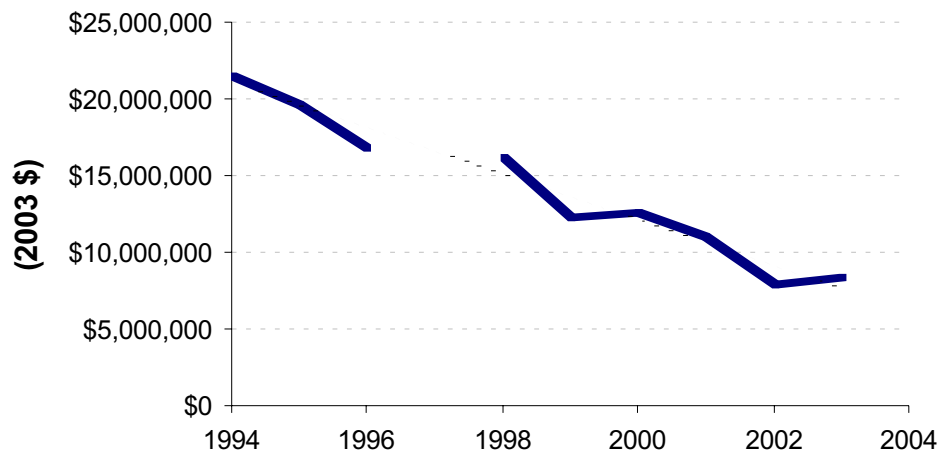
Figure ES-2: Auction Winners Declining, Prices Rising



Exelon’s cost-cutting measures could harm the reliability of New Jersey’s electricity system and quality of service to consumers.

- Large holding companies like Exelon have a history of making cuts that lead to reduced reliability of the electricity system, driven by pressure to reduce costs in order to deliver larger returns to shareholders.
- Compared to PSEG, Exelon has a poor reliability and customer service record.
 - o Exelon subsidiary ComEd operated the “worst performing circuit” in Illinois in 2002. In 2003, the company received the lowest customer satisfaction rating of all utilities in the state.
 - o Pennsylvania-based Exelon subsidiary PECO has steadily reduced investment in transmission system maintenance since the deregulation debate began in the mid-1990s. (See Figure ES-3.) After takeover by Exelon in fall of 2000, PECO further reduced transmission maintenance investment by one-third.
 - o In 2003, PECO had the worst overall customer service satisfaction rating out of seven Pennsylvania electric utilities. In addition, PECO had the worst record of justified customer complaints in the state, 90 percent higher than the average utility.
 - o In contrast, PSE&G has the best reliability record in the state—fewer outages and service interruptions than any other New Jersey carrier in the last decade. PSE&G also has over 1,300 service employees, including a system of walk-in customer service centers, many of which are located in urban areas and where a high percentage of PSEG customers pay their bills.
 - o If Exelon chooses to cut investments in transmission maintenance and customer service—as it has in other states—it could reduce the reliability and quality of electric service in New Jersey.

Figure ES-3: Declining Investment in Transmission Maintenance at PECO



Exelon is basing much of its business strategy on increasing the output of nuclear power plants, potentially risking public safety.

- Exelon is often praised by investor analysts for what is known as “The Exelon Way,” a system of operating nuclear power plants at higher rates of output, thus earning higher rates of return for shareholders. However, that additional productivity comes at great risk to public safety:
 - o “The Exelon Way” involves cutting on-site staff, firing safety whistleblowers and pushing nuclear reactor output to its limits. Although Exelon practices can result in productivity above 90 percent of capacity, serious damage to reactor systems can result.
 - o Exelon delays necessary repairs to coincide with planned shutdowns for refueling to minimize interruptions in power production and maintain high output. Despite the risks of operating damaged equipment, Exelon is driving a trend toward fewer scheduled shutdowns for maintenance and shorter refueling outages, leaving a much smaller margin for error when it comes to safety.
 - o Exelon’s business strategy also depends upon extending the licenses of aging nuclear power plants, like Oyster Creek in Ocean County, pushing 1960s-era technology 20 years beyond its intended life and increasing the amount of dangerous nuclear waste building up at reactor sites across New Jersey. Nuclear technology is inherently danger-

ous and extending reactor lifetimes could increase the risk of a catastrophic accident or terrorist attack.

New Jersey regulators would lose the power to protect consumers from risky investment decisions.

- State regulators would lose the authority to protect consumers from risky non-utility business ventures. These ventures can put pressure on a company’s credit rating and lead to higher interest rates—which are then passed on to New Jersey families and businesses.
 - o After a potential takeover, PSEG would become part of a federally regulated holding company, subject to federal jurisdiction over its financial practices. New Jersey regulators would lose any significant power to regulate risk in PSEG’s investment decisions.
 - o To make matters worse, Congress recently repealed the Public Utility Holding Company Act. As a result, the federal government has far less ability to protect consumers from any risky investment decisions Exelon chooses to make.

Concessions will not solve the long-term problems inherent with the proposed takeover.

In order to win regulatory approval of its plan, Exelon is likely to propose deals or make concessions to federal and state regulators. Exelon has already revealed a proposal to divest a small amount of its assets to competitors and claimed that the economic efficiencies created by the deal will benefit consumers.

However, the proposed concessions would only sugarcoat the deeply rooted anti-competitive and anti-consumer problems inherent in the merger:

- Exelon’s proposed divestiture is far too small to mitigate the market power it will gain or the imbalance it will cause in the New Jersey and PJM wholesale energy markets. Exelon’s claims that the plan will eliminate market power concerns are based on:
 - o A mathematical concentration screen that fails to analyze possible effects on New Jersey’s unique auction system;
 - o A screen originally designed for more typical retail commodity markets like office supplies or rental cars—not a commodity with the unique attributes of electricity; and
 - o Arbitrary concentration thresholds that are not necessarily connected to effects in the marketplace or prices consumers must pay.
- In addition, Exelon has not formally proposed sharing any of the economic efficiencies it expects to create with ratepayers.

- o Even if Exelon did share the savings, they would amount to only a token decrease in electricity costs for the average residential or commercial electricity consumer—on the order of 21 cents a month per household for the next four years.

New Jersey regulators should reject Exelon’s proposal.

Exelon’s takeover of PSEG can only proceed with approval from the New Jersey Board of Public Utilities (BPU). The BPU should reject the proposal on the grounds that it does not serve the public interest—and in fact could reduce competition, raise rates, reduce reliability and risk public safety.

Such a decision would not be without precedent. In the past year, Arizona and Oregon utility regulators stopped out-of-state businesses from buying state-based energy companies because the deals did not provide any public benefit.

Similar action is warranted in this case. President Fox and the New Jersey Board of Public Utilities Commissioners should defend the interests of New Jersey’s electricity consumers and reject Exelon’s takeover of PSEG.

Introduction

The provision of electricity service has long been recognized as a “natural monopoly.”¹ Integrated utility companies have historically held complete control over defined service territories, because the costs of stringing competing sets of poles and wires and building competing generating plants to serve a single market would be greater than any economic benefits that would result. In the absence of regulation, these companies would possess almost unmitigated power to dictate energy prices and terms of service to their customers.

Thus, almost from the beginning of the electric power industry, government oversight has been essential to protecting the public interest in affordable and reliable service. As utility systems consolidated and became more financially and physically interconnected, state governments—and eventually the federal government—exercised increasing regulatory control over the provision of electric power. Regulators worked to ensure “just and reasonable” rates and guarantees of reliable service to consumers, while allowing utilities the opportunity to earn a fair return on investment.

The past decade, however, has brought massive change to the electric power business in New Jersey. Based on the notion that markets could succeed where traditional regulatory systems have fallen short, policy-makers launched an effort to restructure the industry in order to allow competition and consumer choice—altering traditional relationships among utilities, regulators and consumers. New Jersey policy makers chose to pursue restructuring on the assumption that market forces would lead to lower costs, at least in the long term. At the same time, policy makers reaffirmed the goal of providing safe, reliable power on reasonable terms to all consumers.

The transition to a restructured electric system has not gone smoothly. Consider:

- Residential consumers in New Jersey enjoy little more choice than they did before restructuring, with less than 0.05 percent choosing an alternative electricity supplier.²
- Restructuring has thus far failed to reduce costs for the bulk of electricity consumers—especially residential

If the BPU truly believes in the power of competition to deliver reliable electricity service to New Jersey electricity customers at “just and reasonable” rates, then it has no choice but to deny this merger.

customers. While rate caps mandated in the first few years of restructuring held rates down temporarily, their expiration in August 2003 led to immediate rate hikes of more than 15 percent.³ To make matters worse, consumers now must *pay back* fixed rate savings—with interest.

- The reliability of the electric system has been degraded.⁴ The Northeastern U.S. blackout of August 14, 2003 was just the most severe of a number of major system disturbances that have occurred in the decade since restructuring began. Economic losses from the Northeastern blackout have been estimated at approximately \$6 billion to \$10 billion.⁵ The damage caused by this single event, triggered by problems in one small part of the electric grid, represented about six-hundredths of a percent of the U.S. gross domestic product in 2002.⁶
- Meanwhile, the prospect of financial gain has created pressure to draw even more power from existing nuclear plants—generating additional nuclear waste and potentially creating safety problems.⁷

The New Jersey Board of Public Utilities (BPU) is charged with mitigating these problems and making the system work. To get around the lack of meaningful competition at the retail level, the BPU created a bulk wholesale auction, encouraging suppliers to compete for the right to serve groups of customers in each major service area within the state. The BPU is depending on vigorous competition between suppliers at this auction to deliver New Jersey electricity consumers the best deal.

However, effective competition cannot exist when one behemoth company, or even a handful of large players, dominate

the market. Think of a mom-and-pop corner store, or even a New Jersey-focused retail chain, trying to compete against Wal-Mart. When one company controls too much of the market, its decisions become paramount in determining the cost, nature, and quality of service provided to all customers in that market.

That is why the BPU should be concerned about Exelon Corporation, a large out-of-state utility holding company, attempting to take over Public Service Enterprise Group (PSEG), a New Jersey-based company focused on producing and delivering much of New Jersey’s energy supply.

Allowing Exelon to take over PSEG would add to a growing wave of investor-owned utility takeovers. In the past five years, all of New Jersey’s four investor-owned electric utilities, two of four gas suppliers, and four of the largest water companies have been involved in mergers or takeovers by out-of-state corporations in \$35 billion worth of deals.⁸ The trend is not limited to New Jersey; utilities all across the country are merging and acquiring competitors, threatening the growth and development of a truly competitive electricity marketplace.

If the trend continues, a handful of utility companies could end up with control over the lion’s share of electricity generation and distribution across the country. Increasing consolidation threatens to distance companies from local communities, ratepayers and regulators, harming the public interest.

In the coming months, the Board of Public Utilities has a critical choice to make.

If the BPU truly believes in the power of competition to deliver reliable electricity service to New Jersey electricity customers at “just and reasonable” rates, then it has no choice but to deny this merger.

The Takeover Would Increase Exelon's Market Power

On February 4, 2005, Exelon Corporation requested formal permission from New Jersey regulators to acquire Public Service Enterprise Group (PSEG), the last remaining New Jersey-based energy company that hasn't been taken over by a large out-of-state corporation. If allowed to proceed, this takeover would increase Exelon's market power and significantly impact New Jersey electricity consumers.

Exelon and PSEG are two of the largest utility companies in the country. Combining their operations and assets would create the single largest utility entity in business today.⁹

The size and scope of this entity would threaten the viability of New Jersey's fledgling energy market. Both companies produce power for New Jersey's electricity markets. Moreover, the two companies are competitors in the region managed by PJM Interconnection, which includes New Jersey, Pennsylvania, and other areas in the Mid-Atlantic and Midwest (See "PJM—the Basics" on page 13.) Their consolidation would impair the development of effective competition in the PJM wholesale electricity market as well.



Photo Courtesy of PSEG

PSEG Headquarters in Newark.

The new company's service territory would comprise 18 percent of the entire population in the PJM region.¹⁰ The company would control the nation's larg-

Market Power in the Electricity Industry

Market power “signifies the degree of control that a single firm or a small number of firms has over the price and production decisions in an industry.”¹³

In the electricity industry, market power can be exercised by large suppliers under the right conditions. For example, under conditions of relatively high demand, suppliers can withhold output from a power plant in order to drive up prices and earn a higher return overall (especially when imports are limited due to transmission constraints).¹⁴ Enron and other energy suppliers engaged in a variety of these tactics during the California energy crisis to earn a greater profit.¹⁵

Electricity is unusually prone to anti-competitive (and therefore, anti-consumer) practices, due to its unique attributes:

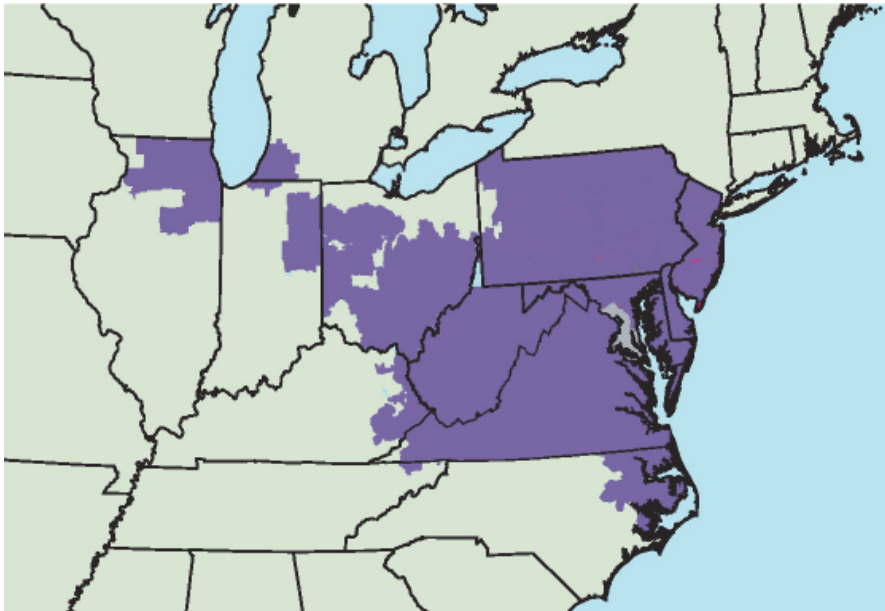
- Electricity service tends toward monopoly because of the complicated requirements of energy delivery to consumers over an intricate system of generators, transformers, and wires;
 - Companies acting alone, without collusion, can have significant impacts on prices and on the overall function of the system;¹⁶
 - Electricity demand does not quickly or easily respond to changes in price, unlike more typical products;
 - Electricity cannot be stored on a large scale;
 - Demand fluctuates from second to second; and
 - The nature of the transmission system can result in constraints limiting the ability of distant suppliers to effectively compete in a local market.
- Mergers between competitors can increase the opportunity for abuse of market power. When market concentration levels reach the point of “tight oligopoly” (in which the four leading participants have 60 to 100 percent of the market share), market concentration can:¹⁷
- Allow the profitable exercise of market power at a lower demand level;¹⁸
 - Increase the margin above competitive levels at which prices can be maintained;¹⁹
 - Cause prices to track corporate strategies and the bargaining power of individual players more closely than actual costs;²⁰
 - Lead to higher profits for major players than would exist under effective competition or regulation;²¹
 - Create barriers to market entry for potential competitors;²²
 - Enhance the benefit of strategic behavior against rival companies;²³
 - Promote greater attention to the demands of the largest electricity users, including offering secret low rates and selective concessions;²⁴
 - Create price rigidity, preventing customers from benefiting when the costs of service fall;²⁵
 - Induce utilities to prioritize goals other than adequate and reliable service; and²⁶
 - Encourage utilities to de-prioritize societal goals like universal service, conservation, and infrastructure enhancement.²⁷

PJM—The Basics

PJM Interconnection is a regional transmission organization (RTO) that manages and coordinates the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. It operates a variety of energy trading markets, from a real-time spot market to annual auctions.

PJM has expanded significantly in the last year. On May 1, 2004, Commonwealth Edison (a subsidiary of Exelon) joined PJM. On October 1, 2004, American Electric Power joined PJM, followed by Duquesne Light Co. on Jan 1, 2005. Virginia Electric and Power Co. (a subsidiary of Dominion Resources) joined PJM in May 2005.

Territory served by the PJM Interconnection.



est power marketing business and would enlarge what is already the nation's largest fleet of nuclear power plants. Additionally, it would own 40 percent of firm natural gas supply capacity in the region stretching from Philadelphia to northern New Jersey—where gas-fired generators often set the price of electricity.¹¹ The company would have \$79 billion in as-

sets and annual revenues on par with the entire New Jersey state government.¹²

The decisions of the new Exelon, given its control over assets and infrastructure, would become extremely influential in determining the nature, quality, and price of electric service for customers across the Mid-Atlantic and the Midwest.

Market Concentration in PJM

Market concentration is already an issue in the PJM Interconnection. According to the PJM Market Monitoring Unit, the system faces the following competition challenges:²⁸

- “Market Power is endemic to the structure of PJM Capacity Markets;”
- The market has “high levels of supplier concentration.” In other words, a few large companies supply large amounts of generation capacity;
- When demand rises, individual suppliers become critically necessary and irreplaceable, creating conditions for the exercise of market power.
- Electricity demand does not respond quickly to changes in price.

The Market Monitoring Unit characterizes concentration as moderate overall, with high concentration in the peaking and intermediate load segment of electricity supply, and moderate concentration in base load suppliers.²⁹

A 1997 study of the New Jersey electricity market found that transmission constraints can make the eastern region of PJM (encompassing New Jersey) a geographically distinct market and enhance opportunities to exercise market power.³⁰ The study found that, under conditions prevalent in New Jersey when there were five major New Jersey utilities, market prices began to exceed competitive levels when demand reached 88 percent of the annual peak, a frequent occurrence in the summer season.

Although PJM as a whole expanded in 2005 with the addition of Dominion Virginia Power, market power issues are much more likely to arise in the eastern part of PJM. In filings with the Securities and Exchange Commission, PSEG notes:

Due to transmission constraints, [prices] may be higher in congested areas during peak demand periods, reflecting the bid prices of the higher cost units that are dispatched to supply demand. This typically occurs in the eastern portion of the grid, where many of [PSEG] Power’s plants are located.³¹

Paul Joskow at MIT examined concentration levels in PJM-East under a variety of demand conditions and found that on average only four suppliers effectively exist.³²

The Federal Energy Regulatory Commission (FERC) defines any market with a concentration index above 1,000 as “concentrated.” (However, this standard does not mean that market power cannot be exercised in markets with a lower index—see “Divestiture Will Not Fully Mitigate Market Power Concerns” on page 33.) PJM-East currently has a concentration index up to 1,500 under periods of high demand, and 1,270 under low demand.³³

The Market Monitoring Unit at PJM concludes that “market structure issues in the PJM Energy Markets have been offset to date by a combination of high levels of supply, moderate demand and competitive participant behavior.”³⁴

However, consolidation of two of the major players in the PJM region could change this situation significantly. In an October 2005 report, the Market Monitoring Unit at PJM notes that “the proposed merger would significantly increase concentration in the Energy, Capacity and Regulation markets and therefore raises concerns about potential adverse competitive effects, absent mitigation.”³⁵

Table 1: The Attributes of PSEG, Exelon, and the Proposed “Exelon Electric and Gas”

	PSEG	Exelon	“Exelon Electric and Gas”
Electricity Customers	2.1 million ³⁷	5.2 million ³⁸	More than 7 million ³⁹
Gas Customers	1.7 million ⁴⁰	460,000 ⁴¹	More than 2 million ⁴²
Generating Capacity	14,600 MW ⁴³	34,500 MW (25,800 MW of plants and 8,700 MW of long-term contracts and deals) ⁴⁴	50,000 MW (40,000 MW of plants and over 9,000 MW of long-term contracts and tolling deals) ⁴⁵
Nuclear Generating Capacity	3,484 MW ⁴⁶	16,751 MW ⁴⁷	20,200 MW
Gross Annual Revenues	\$11 billion ⁴⁸	\$15 billion ⁴⁹	\$27 billion ⁵⁰
Net Annual Profit	\$1 billion ⁵¹	\$1.9 billion ⁵²	\$3.2 billion ⁵³

The Takeover Would Make Exelon the Largest Utility in the PJM Region and the Nation’s Largest Utility Overall

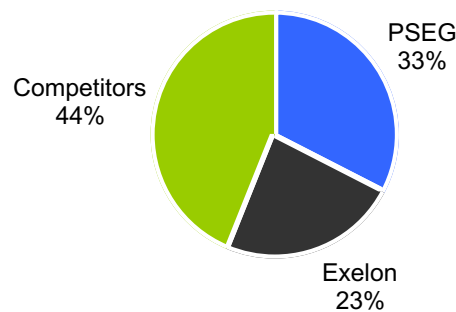
If Exelon succeeds in acquiring PSEG to form “Exelon Electric and Gas Company,” it will become the largest utility company in the country.³⁶ Table 1 summarizes the basic attributes of Exelon, PSEG, and the proposed new company.

Generation controlled by the new company would be absolutely necessary to ensure the stability of the electricity grid under peak load conditions. If for some reason the new company chose not to supply energy, its competitors would not be able to meet demand. As a result, prices would skyrocket to the PJM bid cap of \$1,000/MWh and the electricity system would fail. This places Exelon into a position of strategic importance in the electricity market.

Combined Generating Capability

PSEG and Exelon are the two largest players within the eastern sub-market of PJM (PJM East). According to analysis by the New Jersey Board of Public Utilities (BPU), PSEG currently owns 10.1 gigawatts (GW) of generating capacity in PJM East, and Exelon owns 7.2 GW—33 percent and 23 percent of local generating capacity, respectively.⁵⁴ Together, these two companies would control 56 percent of the total capacity within PJM East, before any proposed mitigation measures.⁵⁵ (See Figure 1.)

Figure 1: Exelon Would Control 56 Percent of Generating Capacity in PJM East



Extensive Power Marketing Activity

In addition to supplying large amounts of electricity to the wholesale market, Exelon would also be one of the largest brokers of this power to others. If allowed to acquire PSEG, Exelon would control 6.5 percent of national market share in the wholesale energy trading and marketing business.⁵⁶

Exelon would become one of the most powerful energy marketers in New Jersey. The company's size would enable it to pressure competitors in New Jersey's auction as well as in negotiations with large commercial and industrial customers who buy their power individually.

Natural Gas Supply

PSEG and Exelon together control a large natural gas supply and delivery business. Control of natural gas assets aggravates the potential for market power problems, since natural gas-fired generators set overall market prices during periods of peaking demand.

The introduction of negotiated rates for open-access pipelines transporting gas over long distances, coupled with marketing of gas at the retail level by affiliate companies, creates a clear potential for vertical price discrimination that the company could use to its advantage.⁵⁷ Small changes in fuel price could have a large impact on consumers' electricity and gas bills.

PSEG is the dominant natural gas supplier in New Jersey, serving 60 percent of all residential customers and over 70 percent of all commercial and industrial customers.⁵⁸ PSEG owns 1.17 billion cubic feet-per-day or 427 cubic feet annually of natural gas transportation capacity under contract to supply the needs of its own power plants and its retail natural gas customers.⁵⁹ The company also

owns 82 billion cubic feet of storage capacity it uses to meet a peak winter demand of 940 million cubic feet-per-day.

Exelon subsidiary PECO is the dominant natural gas supplier for a 1,900 square mile area surrounding Philadelphia. PECO annually purchases 46 billion cubic feet of natural gas under long-term contract, supplemented by liquefied natural gas, underground storage, and other sources. Peak gas demand can reach 718 million cubic feet-per-day.⁶⁰

Together, the companies represent the dominant natural gas suppliers in the region stretching from Philadelphia to northern New Jersey. To give a sense of scale, PSEG and Exelon together are capable of supplying more than 473 billion cubic feet of natural gas per year, more than three-quarters of New Jersey's annual demand of 610 billion cubic feet.⁶¹

According to analysis by the BPU, the merged company would own 40 percent of firm natural gas supply capacity in the region, and the natural gas market would be extremely concentrated.⁶² FERC and the Federal Trade Commission define any market with a concentration index above 1,000 as "concentrated." Analysis of the gas market in PJM East shows that the concentration index is currently 1,469—and after the merger it would rise to 1,942.⁶³

With control over such a large gas system, seemingly small decisions by Exelon about the availability of gas, the timing of use, or the timing of refilling reserves could have large impacts on the overall market price of gas.⁶⁴

Manipulating gas prices would have significant impact on the electricity market. In PJM East, gas-fired generators set the price for electricity during 60 percent of the hours of peak demand—and 40 percent of the time overall.⁶⁵ During these periods, increased gas prices will directly translate into more expensive electricity.



Nuclear power plants make up part of PJM East's base load generation.

As described by the BPU in their filings with FERC, Exelon would have an incentive to use its control over the gas market to its advantage. By raising the price of gas to all users (including itself), Exelon could raise the cost of electricity.

With higher electricity prices, Exelon would realize higher revenues from its continually-operating base load generators—in effect earning payments in excess of their energy costs.⁶⁶

The Takeover Could Threaten The Viability of New Jersey's Electricity Auction, Leading to Higher Rates

Allowing Exelon to take over PSEG could threaten the viability of New Jersey's electric service auction system and lead to higher electricity bills for consumers.

New Jersey depends on competition in the wholesale electricity market to give consumers the best deal. After it became clear that retail competition in New Jersey had failed (particularly for small customers), New Jersey regulators set up an auction for electricity generation companies to compete for the right to serve customers in bulk.

However, the number of winners at the auction has declined almost two-thirds in the last two years, from 15 to six corporations. At the same time, the fixed price for electricity resulting from the auction has risen 19 percent. Although an increase in natural gas costs accounts for some of this increase, the overall pattern follows a national trend of declining numbers of ever-larger companies able to compete in the electricity market in a meaningful way.

Further consolidation of major players in the wholesale electricity market will only aggravate the problem. For example,

Illinois is working to set up a basic generation service auction modeled after the process in New Jersey. Because of a lack of meaningful competition, Exelon is the only generating company that appears prepared to participate in the auction in the territory of its utility affiliate, Commonwealth Edison. In Ohio, a large player in the Ohio power market recently refused to participate in an auction to supply generation service, causing the auction to fail outright. As a result, consumers in Toledo must now pay \$2 billion in unscheduled "rate stabilization" fees over the next several years.

Allowing Exelon to take over PSEG would make the New Jersey market more like the dysfunctional power markets in some Midwestern states. Consumers would end up paying the price.

New Jersey Depends on Wholesale Competition to Hold Down Rates

Over the past decade, the electric power business in New Jersey has under-

gone massive change. Based on the notion that markets could succeed where traditional regulatory systems have fallen short, policy-makers launched an effort to restructure the industry in order to allow competition and consumer choice.

Restructuring has taken place on two levels. In New Jersey, *retail restructuring* has allowed consumers to choose their suppliers of electricity and allowed companies that generate electricity to compete for consumers' business. Across the country, *wholesale restructuring* has changed the way utilities and other firms produce, trade and sell power by opening the wholesale power system to market competition.

Retail restructuring has largely proved unsuccessful in the states that have pursued it. In New Jersey, less than 0.05 percent of residential consumers have actually switched electricity suppliers to find a better deal. Including commercial and industrial customers, only 0.27 percent of customers have switched suppliers.⁶⁷

To solve this problem, the New Jersey Board of Public Utilities (BPU) set up a bulk auction for suppliers to compete for the right to serve large blocks of demand—consumers who stayed with their

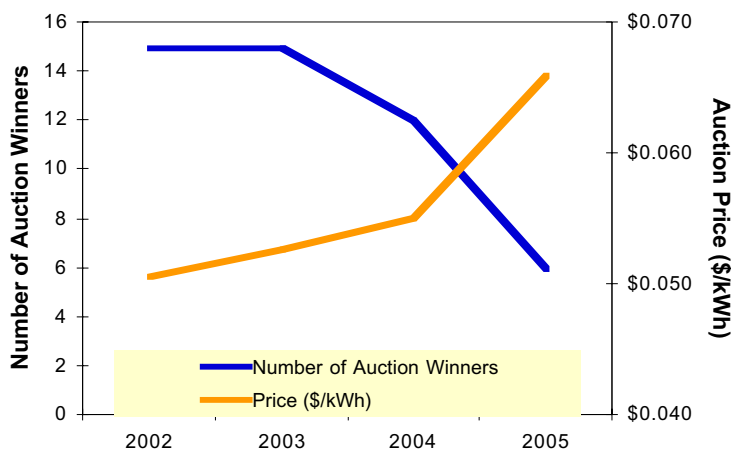
default supplier. At the auction, generators bid to meet a certain amount of energy demand for a fixed price over a three-year term. The actual prices paid by consumers are updated every year based on the result of the past three auctions.

New Jersey's Wholesale Electricity Auction is Trending Toward Fewer Competitors and Higher Prices

Since the first auction in 2002, the number of companies with winning bids in the auction has declined significantly. At the same time, the final auction price of electricity has risen. While these two facts are not necessarily linked, they are suggestive of a trend towards industry consolidation and less competitive pressure to deliver the best deal.

The number of winners at the auction has declined almost two-thirds in the last two years. In 2002, 15 suppliers won bids to supply electricity, and the average resulting bid price was 5.1 ¢/kWh.⁶⁸ In the most recent auction carried out in February 2005, only six suppliers won bids, and the average winning price rose to 6.6

Figure 2: Trends in the Number of Winning Companies and the Average Winning Bid Price in New Jersey's Basic Generation Service Auction⁷⁰



c/kWh, an increase of 19 percent.⁶⁹ Figure 2 compares the two trends.

Increases in natural gas prices likely played a partial role in the cost increase. However, the percent of energy supply rights going to a single bidder is increasing as well (Figure 3). In the PSE&G service territory, the maximum number of bids won by a single bidder increased from 21 percent in 2002 to 36 percent in 2004.⁷¹

In 2004, PSEG Energy Resources & Trade (PSEG’s energy marketing subsidiary) was the dominant player in the auction, both for residential and small commercial load and industrial load. In the residential auction, PSEG won exactly one-third of the energy contracts up for bidding.⁷² Although the BPU does not require bidders to disclose the source(s) of the power that is bid into the auction, PSEG officials have also stated publicly that they have provided, indirectly or directly, at least 75 percent of the supply to the auction.⁷³

This pattern of energy supply rights going to a single bidder follows a national trend of declining numbers of ever-larger companies able to compete in the electricity market in a meaningful way.

The New Jersey BPU, after analysis of the auction procedure and results, has certified all of the bulk auctions to date as sufficiently “competitive”.⁷⁵ Allowing Exelon to take over PSEG could threaten the viability of New Jersey’s auction system by further increasing the ability of one company to provide the vast majority of electricity supplied to New Jersey’s annual BGS auction. The BPU may discover that its auction process has become uncompetitive, and that the auction process no longer delivers the best deal.

Market Consolidation Will Further Reduce Competition and Lead to Higher Rates

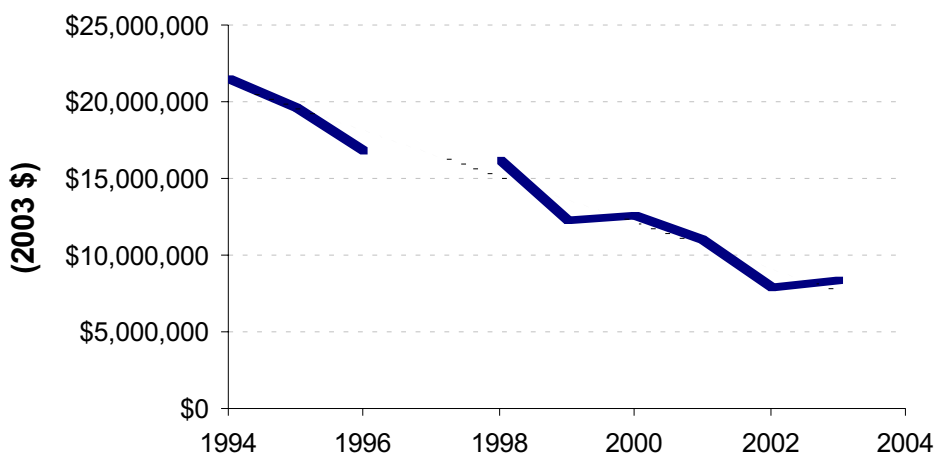
Further consolidation of major players in the wholesale electricity market will aggravate the trend toward less competition and higher rates.

New Jersey regulators need only look toward more dysfunctional energy markets in the Midwest to see the effects of a lack of meaningful competition. Exelon appears to be the only company prepared to participate in the upcoming auction for

demand in the service territory of its Illinois transmission and distribution subsidiary ComEd. In Ohio, FirstEnergy has taken advantage of uncompetitive conditions to negotiate a deal with state regulators to impose \$2 billion in “rate stabilization fees” on its customers.

With fewer effective competitors, New Jersey’s auction system could pro-

Figure 3: The Maximum Percentage of Energy Supply Rights Going to a Single Bidder (36-Month Contracts for the PSE&G Service Territory)⁷⁴



duce similarly disappointing results, with New Jersey consumers paying the price.

Exelon May Be the Only Supplier Participating In the Upcoming Illinois Auction

In Illinois, Commonwealth Edison is preparing an auction where generators will bid for the right to supply demand within its service territory. Exelon, the parent of ComEd, appears to be the only generator able to participate in the auction. Other companies face barriers to entry that could sink the auction before it even begins.⁷⁶

Midwest Generation is the only other major power supplier competing with Exelon in Northern Illinois. However, it is a much smaller company, with roughly 9,300 MW of generating capacity.

Midwest Generation has been almost completely dependent upon Exelon for its operating revenue. In the early part of the decade, the company derived up to 99 percent of its revenues from sales to Exelon. However, at the end of 2004, its contracts with Exelon expired, exposing the company to the volatility of the spot market. The company announced the possibility of bankruptcy.⁷⁷

From the start, auction rules requiring participants to post collateral could exclude a variety of competitors.⁷⁸ Even if those barriers are removed, the auction has the potential to pit companies that are much smaller than Exelon, some of which have historically depended on revenue from Exelon in order to operate, as competitors with Exelon for the service territory of one of Exelon's affiliates. As a result, Exelon holds all the keys to the auction and stands in a position where it has a lot of power to influence the auction results.

Lack of competition in the Illinois auction is likely to lead to higher electricity costs for Illinois consumers.

FirstEnergy Refuses to Participate in its Own Auction

Ohio's recent auction demonstrated other negative effects for consumers that can result when meaningful competition fails to develop.

In December 2004, Ohio held an auction for the right to supply energy to FirstEnergy's service territory. The auction was dramatically uncompetitive. FirstEnergy's generation subsidiary, one of the largest and most powerful players in the market, refused to participate in the auction altogether.⁷⁹ The auction lasted only two hours, and delivered a price reduction of only 0.05 cents per kWh below the starting bid.⁸⁰

State regulators declared the result uncompetitive, and proceeded to approve a plan submitted by FirstEnergy to collect more than \$2 billion in "rate stabilization" charges over the course of three years, beginning in 2006.⁸¹ The charges are an unscheduled extension of a stranded cost recovery plan for failed investments in nuclear generation. First Energy justified the rate stabilization charges by saying, "If the commission had chosen the auction alternative, our customers' generation price would have increased by more than 20 percent."⁸² However, because FirstEnergy (the largest player) chose not to participate in the auction, that outcome was practically guaranteed from the start.

Market consolidation in New Jersey's auction system, and in PJM as a whole, could create conditions where one large player is able to exert similar control over the price-setting process, placing its competitors at a disadvantage and delivering its customers a flawed deal.

Exelon's Cost-Cutting Measures Could Reduce Electric System Reliability and Quality of Service

Participants in restructured electricity markets, where regulators no longer set fixed rates of return on investment, are under enormous pressure to reduce costs to deliver higher returns to shareholders.

Large holding companies like Exelon have a history of making cuts that lead to reduced reliability of the electricity system. Exelon subsidiary Commonwealth Edison earned the ranking of “worst performing circuit” in Illinois in 2002, and ranked lowest in residential customer satisfaction in Illinois in 2003. Exelon subsidiary PECO in Pennsylvania has steadily reduced investment in transmission system maintenance since the deregulation debate began in the mid-1990s. After takeover by Exelon in fall of 2000, PECO further reduced transmission maintenance investment by one-third.

In contrast, PSEG (the only New Jersey energy company not owned by an out-of-state holding company) has the best reliability record in the state and comprehensive quality of service.

Exelon has a Poor Reliability Record

Exelon has a history of cutting costs in ways that contribute to reliability problems.

ComEd

In 2002, the Illinois Commerce Commission gave Commonwealth Edison (Exelon's electricity and transmission distribution subsidiary in Illinois) poor reliability marks. The report concluded that:

- “The most serious... recommendation concerns how ComEd will maintain or improve reliability and customer satisfaction with future projected distribution capital investment amounts less than the levels in the mid-1990s... Staff noted a declining annual compounded growth rate of 6.48%...”⁸³
- “The second most serious recommendation concerns the number of interruptions that ComEd classified as being controllable. Staff found it

absurd that in 2002 ComEd classified only 2.6% of the total interruptions as controllable. Staff believes that most service interruptions are controllable...⁸⁴

- “Staff remains concerned by ComEd’s poor ranking compared to other jurisdictional utilities in 2002 for worst performing circuit. Staff continues to recommend that ComEd focus on improving customer service...⁸⁵
- “Staff did state that field observations indicate that there is much potential for improvement in ComEd’s vegetation management program...Staff noted that ComEd’s future tree trimming budgeted spending levels are declining from 2002 actual levels.”⁸⁶

In 2003, the Illinois Commerce Commission noted many of the same problems:⁸⁷

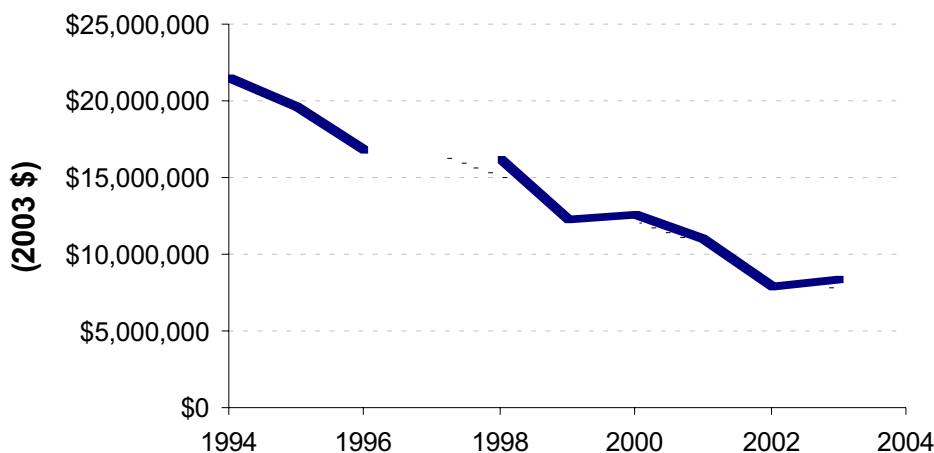
- ComEd had the lowest overall residential customer satisfaction rating among the nine utility companies in Illinois.

- The duration of interruptions for the average consumer worsened from 2002 to 2003 in all of ComEd’s service regions.
- ComEd’s worst performing circuit (in Chicago), is the worst performing circuit in the entire state in terms of average interruption duration, and third-worst in terms of interruption frequency.
- ComEd projects further cuts in transmission and distribution spending in the future. The Commission notes, “While ... ComEd states that it ‘is constantly striving for ways to improve operating efficiencies and internal processes,’ the Commission is concerned about the trends ... [toward reduced transmission and distribution spending] because of their potential reliability implications towards the end of this decade.”

PECO

Similar behavior is exhibited by Exelon’s transmission and distribution subsidiary in Pennsylvania, PECO. Fig-

Figure 4: Declining Investment in Maintaining Transmission Infrastructure at PECO⁸⁸



ure 4 shows a consistent decline in spending on transmission system maintenance. PECO began reducing investment in transmission maintenance in the mid 1990s, at the beginning of the national debate over electricity industry restructuring. However, after Exelon took over PECO in October of 2000, the trend continued.

The priorities of the company are also reflected in its customer service performance. In 2003, PECO had the worst overall customer service satisfaction rating out of seven Pennsylvania electric distribution utilities. PECO also ranked worst in the ease of reaching the company on the phone, in using the company's automated phone system, and in satisfaction with how a service employee handled the interaction.⁸⁹ In addition, PECO had the worst record of justified consumer complaints in the state, 90 percent higher than the average utility.⁹⁰

PSE&G Has the Best Reliability Record in New Jersey

In contrast, PSE&G has the best reliability record in the state over

the past decade, as compared to the other three investor-owned utilities, all of which have been taken over by out-of-state holding corporations.⁹¹

The New Jersey Board of Public Utilities monitors the performance of the electricity system by keeping track of the frequency and duration of service interruptions within each of the four major service territories in the state. Between 1994 and 2003, PSE&G has had a consistently low number of interruptions, and the lowest frequency of disturbances among New Jersey utilities (although the frequency increased slightly over time).⁹²

One factor in this record may be reflected in the generally increasing level of investment PSE&G has made in maintaining its transmission network. (See Figure 5.)

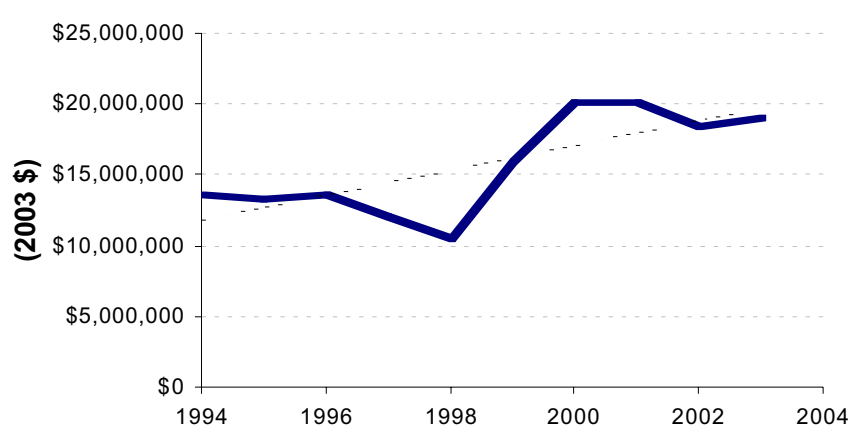
PSE&G also has over 1,300 service employees, including a system of walk-in customer service centers, many of which are located in urban areas and where a high percentage of PSEG customers pay their bills.⁹³

If the merged company chooses to cut investments in transmission maintenance and customer service jobs—as it has in other states—it could reduce the reliability and quality of electric service in New Jersey.

Photo Courtesy of PSEG



Figure 5: Trends in PSE&G's Transmission Maintenance Investment⁹⁴



Exelon's Business Strategy Depends on Increasing the Output of Nuclear Power Plants, Risking Public Safety

Exelon is often praised by investor analysts for what is known as “The Exelon Way.” This phrase refers to a system of operating nuclear power plants at higher rates of output, thus earning higher rates of return for shareholders.

However, “The Exelon Way” involves cutting staff, firing whistleblowers who raise safety issues and ramping up nuclear reactor output to well above 90 percent capacity. Exelon’s business strategy also depends on petitioning the Nuclear Regulatory Commission (NRC) to extend the operating licenses of aging nuclear power plants for 20 years beyond their designed lifetime. Nuclear technology is inherently dangerous, and these aggressive practices increase the risk of a catastrophic accident.

Exelon is already the nation’s largest owner and operator of nuclear power plants.⁹⁷ Exelon currently owns one nuclear reactor in New Jersey: the Oyster Creek nuclear power plant in Ocean County. If Exelon succeeds in taking over PSEG, it will own and operate all four of New Jersey’s nuclear plants: Oyster

Creek, Salem I, Salem II and Hope Creek. Additional productivity from these plants will come at great risk to public safety.

“The Exelon Way” Means Firing Staff and Ramping up Output at Nuclear Plants

Exelon’s safety record in New Jersey, Illinois and Pennsylvania is less than exemplary, showing a consistent pattern of placing productivity over safety. Exelon has cut on-site staffing levels, extended or sought to extend the licenses of aging plants, experimented with increases in power output, instilled a work culture in which staff are restricted from raising safety concerns, and delayed critical maintenance projects. Exelon management is pushing the nuclear industry as a whole toward shorter refueling outages, longer times between outages, and fewer scheduled shutdowns for maintenance, leaving a much smaller margin for error when it comes to safety.

“The Exelon Way” and Job Cuts

Exelon’s strategy of ongoing job cuts and downsizing creates a work climate that inhibits raising safety concerns, decreasing plant safety.

After Unicom merged with PECO to form Exelon in 2000, Exelon management announced plans to eliminate 2,900 jobs, or 9 percent of its work force.⁹⁶ The nuclear division was slated for an 11 percent cut in staff—maintenance positions in addition to clerical staff.⁹⁷ Although Exelon claimed that staff were performing at higher productivity levels and that the merger created opportunities to eliminate duplicative positions, union workers claimed that the jobs were necessary.⁹⁸

When Exelon announced the new “Exelon Way” business strategy in April 2003, executives celebrated the fact that the company had successfully eliminated 2,000 jobs and cut \$340 million in annual expenses. Executives announced their intention to eliminate many more redundant positions to continue earnings growth.⁹⁹

On-site staffing levels at Exelon-owned nuclear plants have dropped dramatically during this process. According to Three Mile Island Alert founder Eric Epstein, Three Mile Island staffing levels declined from 804 in 1998 to 643 in 2002; and Oyster Creek staffing levels declined from 1,000 (in 1990 when owned by GPU) to 440 in 2003.¹⁰¹

Union workers at Oyster Creek sent a letter to the NRC complaining that an early 2003 Exelon plan to eliminate 50 jobs would impact plant safety. The jobs

slated for elimination included fire protection positions, whose responsibilities would be transferred to the instrumentation and control workers, who did not have adequate training and were already “struggling under [their] own workload.”¹⁰²

“The Exelon Way” of ongoing staff reduction silences workers who might otherwise raise safety concerns. Since no workers have job security, workers equate flagging safety problems with volunteering for the next round of downsizing. In effect, “The Exelon Way” inhibits workers from ensuring that nuclear plants operate as safely as possible.

Exelon’s management of New Jersey’s nuclear plants could involve a similar reduction in staff with a reduction in margin of safety.

Exelon Has Fired Whistleblowers After Safety Complaints

Exelon’s safety culture has been a major problem in Illinois, where whistleblowers have been fired after making safety complaints. Oscar Shirani is one such whistleblower. He worked as a senior quality assurance manager for Exelon when he raised concerns about the safety of Holtec brand dry casks used to store highly-radioactive spent nuclear fuel rods. He was ultimately fired.¹⁰³

Mr. Shirani, a 23-year veteran nuclear engineer, found a variety of design, manufacturing, and regulatory code violations with Holtec dry casks for storing nuclear waste. In May 2000, he asked Exelon to issue a “Stop Work Order” to force

“The Exelon Way is ‘a program to cut employees,’”

– Frank Kuders, maintenance technician at Exelon’s Eddystone plant in Pennsylvania and president of the International Brotherhood of Electrical Workers local union, October 17, 2003.¹⁰⁰

Holtec to correct its faulty practices. Soon after, Shirani was asked to conduct an audit and submit a report. Shirani completed his work in August 2000, reporting nine significant problems with the Holtec dry casks. On December 13, Exelon sent a censored version of the report to Dr. Ross Landsman at the NRC, the official in charge of dry casks in the Midwest. Although Shirani didn't know it at the time, Exelon altered the conclusion of his report, falsely stating that the problems had been resolved.

The following January, Dr. Landsman sent a memo to Bruce Jorgensen, chief of the decommissioning branch at NRC, citing serious concerns with Holtec dry casks. Landsman noted, "The audit was done in June-July 2000, and still the issues are not resolved. Worse yet, I just discovered that the Audit Team Leader [Shirani] is being moved sideways on site, out of the audit group. These findings will be dropped." Landsman concluded, "This audit indicates that in no way do they [Exelon] meet our Region III requirements in implementation of the program. Cost and scheduling are controlling the work."¹⁰⁴

Shirani was eventually transferred out of Exelon's nuclear division to the financial division—a move Exelon and other companies commonly employ to remove whistleblowers. Shirani stayed within the financial division until he was laid off the following October—unfortunately too late to file a formal complaint with the NRC.

However, many other employees have filed formal complaints. In fact, between January 2001 and January 2005, the NRC received 98 complaints about Exelon practices from employees working at Exelon plants that the NRC judged to be justified, accounting for 21 percent of all such complaints nationwide.¹⁰⁵ Among the most serious cases, Exelon was found to have deliberately discrimi-

nated against a former Exelon employee at Pennsylvania's Byron reactor for raising safety concerns in August 2000. Because Exelon admitted fault to the NRC, the company was not charged, the case was settled, and the employee remains anonymous.¹⁰⁶

The high level of formal complaints filed by Exelon workers stems from the silencing effect of "Exelon Way" downsizing. At most plants, workers raise safety concerns to their supervisor or to a company ombudsman. However, Exelon workers are more likely to submit concerns to the NRC as allegations or not raise them at all because of fear of losing their jobs.

Exelon's problems with treating employees who bring up safety concerns with fairness may continue at PSEG's nuclear plants in New Jersey. Exelon has not addressed serious problems with the work environment at Salem County's nuclear plants since the company took over management in January 2005.¹⁰⁷ Exelon replaced Christopher Bakken (the president and chief nuclear officer at PSEG Nuclear, and also the man in charge of PSEG's program to improve the safety culture at the Salem I, II and Hope Creek reactors) with Bill Levis, an Exelon manager. Exelon proceeded to make a variety of staffing changes and terminations at the New Jersey reactors. However, it is unclear whether Exelon honored previous commitments made by PSEG to the NRC, including obtaining approval from an independent Executive Review Board established to ensure that all employees receive fair and consistent treatment, even if they bring up safety concerns. This brings into doubt Exelon's intention to honor any of the many other commitments PSEG made in 2004 to keep the NRC from shutting down the three troubled reactors in Salem County.

Safety Problems Abound at Exelon-Managed Nuclear Plants in New Jersey

On January 17, 2005, Exelon took over management at PSEG-owned Salem I, II and Hope Creek reactors in southern New Jersey. Exelon decided to go ahead with a planned restart of the Hope Creek reactor, which had been shut down since October 2004 after a pipe burst and released radioactive material into a turbine room.¹⁰⁸ The shutdown offered an opportunity to replace an 80,000-pound recirculation pump with a wobbly shaft that experts believed would lead to further problems.¹⁰⁹ Despite protests from the New Jersey Department of Environmental Protection (DEP), Exelon decided to restart the reactor without fixing the recirculation pump.¹¹⁰ Exelon chose to delay repairs until the next refueling outage, scheduled for the spring of 2006, even though NRC Region I Administrator Samuel Collins stated that a replacement pump would be ready to install in March 2005.¹¹¹

Oyster Creek, the oldest nuclear power plant in the country, has also had its share of staffing and maintenance problems since Exelon bought the plant from GPU in 1999.

In the summer of 2003, employees at the plant belonging to the International Brotherhood of Electrical Workers Union Local 127 went on strike in part because of safety concerns. Ed Stroup, the local union president, said the company proposed sweeping changes in workplace rules that would allow it to transfer employees to positions for which they were inadequately trained or skilled, and that his union members were “terrified” about the impact on the plant’s safety. He also said, “There just aren’t enough people to do everything that needs to be done. ...Our members are the last line of de-

fense of safety at that plant and that’s what they’re [Exelon management officials] trying to break down.”¹¹²

The NRC has also cited Exelon for maintenance problems at Oyster Creek. In February 2004, the NRC found that Exelon failed to prevent the failure of a cable providing power to two back-up generators during the previous year. The same cable failure had already occurred twice before, in 1996 and again in 2001. If Exelon management had taken the time to review the original design documents to understand the full scope of the problem, the company would have likely prevented the failures from occurring a third time.¹¹³ In March 2005, NRC officials increased oversight at Oyster Creek after plant workers failed to adjust a threshold used to classify serious emergencies. The mistake could have delayed timely responses by emergency managers during a radioactive release.¹¹⁴

Increased Productivity at Exelon’s Illinois Reactors Has Created Safety Problems

In Illinois, Exelon repeatedly attempted to increase power production at the Quad Cities and Dresden reactors, with dangerous consequences.¹¹⁵ In March 2002, Exelon increased power production at the Quad Cities reactor by 20 percent. Leaks were soon found in the control system for the main turbine, but Exelon restarted the reactor anyway. By April, the plant was vibrating so much that a drain line broke off one of the pipes, and monitors were shaken off from four steam pipes. When managers finally reduced the output to historical norms, inspectors found a gaping hole in the steam dryer. Pieces had fallen off the dryer into the water system where they could potentially prevent reactor safety mechanisms from working properly. Instead of

replacing the dryer, managers simply patched the hole and added braces.¹¹⁶

In July, Exelon restarted the plant and again pushed reactor output above normal levels. The following May of 2003, plant employees discovered a 9-foot long crack in the steam dryer. Despite the serious damage, Exelon does not plan to replace the steam dryer until a scheduled refueling outage in the spring of 2006.¹¹⁷ At another reactor, a 6 1/2-by-9 inch piece of the outer hood bank of the steam dryer disappeared. Repair staff never found or removed the missing pieces. An automatic safety valve also broke because of excessive vibration, preventing its operation in the event of an accident. Although the reactor license only allowed operation in this damaged condition for 14 days, the reactor had operated without a functional safety valve for 110 days. Exelon left the steam dryer in its damaged state, instead scheduling repair to coincide with a refueling outage in March 2005.¹¹⁸

Exelon's Business Strategy Rests on License Extensions for Old Nuclear Plants and Building New Reactors

One of Exelon's primary business strategies is to operate nuclear power plants longer than their intended lifetimes, as well as applying to the NRC for permits to build new nuclear power plants.

Exelon has won 20-year license extensions for six nuclear reactors in Pennsylvania and Illinois from the NRC, pushing 1960s-era nuclear technology beyond its design limitations.¹¹⁹ Exelon is planning



Photo Courtesy of PSEG

A PSEG Nuclear Plant.

to formally file an application in August 2005 for license extension at New Jersey's Oyster Creek nuclear reactor, built in 1969, in addition to preparing for license extensions at its other plants.¹²⁰

This business strategy comes at a high price for New Jersey, including:

- Degraded habitat for fish and other aquatic life in nearby waterways, bays and estuaries as a result of once-through cooling systems;
- Continued production of highly radioactive nuclear waste, for which no safe disposal options exist;
- The risk of catastrophic accidents, similar to (or worse than) the Three Mile Island accident in 1979; and
- The potential for large releases of extremely dangerous radiation to the atmosphere after a potential terrorist attack on an active reactor or a spent fuel storage pool.

New Jersey Regulators Would Lose the Power to Protect Consumers from Risky Investment Decisions

After a potential takeover, PSEG would become part of a federally regulated holding company, subject to federal jurisdiction over its financial practices. If Exelon succeeds in taking over PSEG, important regulatory authority that currently rests with the New Jersey Board of Public Utilities (BPU) will move to federal jurisdiction.

Specifically, New Jersey regulators would lose the authority to protect consumers from the financial burden of risky business ventures. State regulators would not be able to stop Exelon from making investments in non-utility areas that carry higher financial risk. These ventures would put pressure on Exelon's credit rating and could lead to higher interest rates on loans. These costs would then be borne by Exelon's electricity consumers, including citizens and businesses of New Jersey.

To make matters worse, Congress recently repealed the Public Utility Holding Company Act (PUHCA), a federal law setting important limits on large holding companies like Exelon. Exelon was a vocal advocate for loosening these limits. As a result, the federal government now has far less ability to protect con-

sumers from any risky investment decisions Exelon chooses to make.

The Takeover Would Reduce State Oversight of PSEG's Finances, Exposing Consumers to Greater Risk

PSEG is a New Jersey-based energy company. Because the company is headquartered in Newark and is primarily focused on domestic utility business in New Jersey, the New Jersey BPU has authority over the company's non-utility investments.¹²¹

To limit ratepayer exposure to potentially risky investments, in May 1993 the BPU issued an order that limited PSEG's non-regulated investments to 20 percent of its overall assets.¹²² BPU issued the rule in order to keep PSEG focused on serving the main interest of New Jersey consumers: affordable, reliable and safe electricity service. Utility investments tend to be relatively secure compared to investments outside of the company's core expertise in producing and providing electricity and gas service.

When a utility is allowed to take greater investment risks, credit rating agencies may lower the company's bond ratings. With a lower bond rating, a company must pay higher interest rates in order to obtain a loan. With higher capital costs, a utility company could pass the increased cost of capital onto its customers. For example, Xcel Energy, which serves more than 3 million customers in the Midwest and West, saw its bond rating downgraded two notches due to the bankruptcy of its non-regulated generation subsidiary.¹²³ The higher costs that Xcel Energy will incur for credit in the future may well be passed on to consumers of the company's regulated products through their rates.

BPU issued its 1993 order to protect consumers from paying for these types of utility mistakes. However, Exelon is a federally regulated utility holding company. If Exelon succeeds in taking over PSEG, state regulators would lose jurisdiction over PSEG. The BPU would no longer have the authority to shield consumers from risky investment costs.

New Jersey has Better Tools to Protect Consumers than the Federal Government

If PSEG becomes part of Exelon, the federal government will not be able to offer the same level of consumer protection as the BPU.

Congress recently repealed the Public Utility Holding Company Act (PUHCA), a federal law that had set important limits on large utility holding companies. (See "Origins and Evolution of the Federal Role in Regulation" on page 32.) As a result, companies like Exelon now have more flexibility to engage in risky business activities, which their customers could ultimately pay for. If the merger succeeds, PSEG custom-

ers would thus become more vulnerable to abuse.

Exelon was a vocal advocate for this policy change. Exelon claimed that the most effective way to bring new vitality and investment to the industry was to free utilities from regulations that limited their geographic spread and ownership, allowing new types of investors to own public utilities and pumping needed capital into the system.¹²⁴

However, the repeal of PUHCA was an exceedingly risky step. It will have a variety of negative effects, including:

- Greater industry consolidation, reducing the potential for meaningful competition in both retail and wholesale markets;
- Greater leeway for holding companies to manipulate (and conceal) their finances in order to gain favorable regulatory treatment in rate setting; and
- Greater financial instability for utilities along the lines of the instability facing merchant generators and other unregulated energy companies.

Indeed, far from increasing the flow of capital into regulated utilities, repeal of PUHCA will likely make utility capital acquisition far more expensive by stripping utilities of their status as a safe, regulated investment. Standard & Poor's Rating Services, for example, recently concluded that in the years before PUHCA was repealed, the relaxed enforcement of PUHCA did not benefit investors and that, "[i]f PUHCA is repealed, companies would have a greater ability to increase deregulated investment. If these companies choose to pursue those options, we could see deterioration in credit quality for utilities whose corporate parents have an appetite for greater risk."¹²⁵



After a potential merger, PSEG will no longer be subject to the authority of the BPU. The federal government, having repealed PUHCA, will not be able to shield New Jersey consumers from increased risk. Moreover, the industry consolidation that PUHCA repeal has enabled will likely reduce competition, again with potential rate impacts for consumers.

Origins and Evolution of the Federal Role in Regulation

The federal government's role in electricity regulation dates back to the 1930s, when serious flaws in the state regulatory system began to make themselves apparent. Electric utilities created a system of holding companies that allowed them to shift and conceal expenses and revenues in order to gain favorable treatment in state rate-setting. In addition, these financial structures allowed for speculative activity and the shifting of regulated revenues to support non-utility investments—threatening the stability of the electricity system. Meanwhile, the increasing interconnection of power systems over state lines required that authority be asserted at a level higher than individual states.

The Federal Power Act (FPA) and Public Utility Holding Company Act (PUHCA)—both enacted in 1935—established the basic framework for the federal role in utility regulation. Under the two laws, states retained the central mission of establishing retail electric prices, determining the amount of money the utility will be permitted to collect, and deciding how prices can be set among residential, commercial and industrial consumers. The federal government was given jurisdiction over and charged to regulate *interstate* transactions, wholesale rates, interconnection and transmission (wheeling) of wholesale electricity.

PUHCA charged the Securities and Exchange Commission (SEC) with regulating electric utilities' corporate structure and business ventures. PUHCA eliminated the many-tiered structure of holding companies that utilities had used to consolidate control over the industry and manipulate their finances, requiring that holding companies could be no more than twice removed from their operating subsidiaries.¹²⁶ In addition, PUHCA required that multi-state utilities provide detailed financial information to the SEC, similar to the financial information that had long been required under state public utility regulation. Finally, PUHCA required holding companies to receive approval from the SEC before purchasing holdings from other companies and limited the ability of regulated utilities to participate in non-related business ventures.¹²⁷

Congress repealed PUHCA as part of the Federal Energy Policy Act of 2005.

Concessions Will Not Solve the Long-Term Problems Inherent in the Takeover

The anti-competitive and anti-consumer problems inherent in Exelon's proposed takeover of PSEG are deeply rooted.

In order to win regulatory approval of its plan, Exelon is likely to propose deals or concessions to federal and state regulators and other stakeholders. Exelon has already revealed a proposal to divest a small amount of its assets to competitors and claimed that the economic efficiencies created by the deal will benefit consumers.

However, Exelon's proposed divestiture is far too small to mitigate the market power it will gain or the imbalance it will cause in the New Jersey and PJM wholesale energy markets. The market power screen applied to prove the divestiture will work has a variety of flaws that leave substantial opportunities for the exercise of market power. In addition, Exelon has not formally proposed sharing any of the economic efficiencies it expects to create with ratepayers. Even if Exelon did share the savings, they would amount to only a token decrease in electricity costs for the average residential electricity consumer.

Divestiture Will Not Fully Mitigate Market Power Concerns

Exelon has indicated its willingness and intention to divest a small fraction of its power plants in order to pass the market power rules of the Federal Energy Regulatory Commission (FERC).

Exelon has proposed to retain, retire or divest 4,000 MW of capacity. In addition, Exelon has proposed an untested plan to "virtually divest" the output of 2,600 MW of nuclear capacity in PJM-East by selling the power through long-term contracts or annual auctions, while retaining ownership and operational control over the plants. Exelon claims that PSEG hasn't been able to achieve the levels of output that are possible at its nuclear plants, and that Exelon's ability to deliver increased productivity justifies retaining control over the operation of the plants but not the energy they produce, despite the heavy concentration of nuclear capacity this will cause. The company has indicated that 5,300 MW of the total 6,600 MW will be in PJM East.

Exelon has submitted testimony declaring that the divestiture plan brings Exelon's proposal in line with Federal Energy Regulatory Commission (FERC) guidelines for minimizing market power caused by mergers.¹²⁸

However, there are several problems with the Exelon analysis. First, the required divestiture depends on what units are divested or retired and the characteristics of the buyers. These details have not yet been clarified.¹²⁹ Second, the FERC market power screen is inadequate to safeguard the interests of New Jersey consumers because it has a variety of significant flaws in design and scope. To our knowledge, FERC has never rejected a major merger application based on this market power screen. In addition, Exelon's virtual divestiture plan is untested and does not differ substantially from the normal marketing of nuclear power plant output.

The Divestiture Plan Is Inadequate and Lacks Detail

Exelon proposes to divest 5,300 megawatts of capacity in PJM East. After this divestiture, the company would still control 35 to 39 percent of the market depending on where the additional divestiture occurs.¹³⁰ If the proposed virtual divestiture is excluded, Exelon would control the equivalent of 43 to 47 percent of generating capacity in PJM East.¹³¹

The Market Monitoring Unit at PJM (MMU) has analyzed Exelon's divestiture plan and concluded that it lacks enough detail to evaluate adequately.

Exelon has not specified which specific units would be divested or retired, or the characteristics of buyers. The Market Monitoring Unit at PJM notes, "it is not possible to determine whether divestiture will in fact mitigate the issues without knowing the exact units and their distribution..."¹³²

Under a series of scenarios, and with the assumption that divestiture is made to a single company that currently owns no capacity within PJM, the MMU finds that "*the proposed divestiture levels are not consistent with the Guidelines for PJM East.*"¹³³ (emphasis added) In other words, even after divestiture, the market would be too concentrated to be adequately competitive. The MMU also expresses concern about adverse competitive effects on the wholesale market, on New Jersey's generation service auction and within several locational capacity markets.¹³⁴

Furthermore, the BPU notes that "part of the mitigation proposal is to sell or retire generating units, and retirement has the same effect on market prices as withholding...The combination of this market dominance and the potential to retire capacity, rather than sell it to unaffiliated third parties may enable [Exelon] to effect withholding so as to increase prices for capacity and for the benefit of the post-Merger enterprise."¹³⁵

Flaws in the FERC Market Power Screen

A variety of flaws in the design, scope, and application of FERC's market power screen, the tool used by Exelon to show that its divestiture plan would remove market power problems, make it an inadequate safeguard for New Jersey consumers.

Foremost, the screen does not examine or analyze any possible effects on New Jersey's unique auction system. Instead, the screen looks at changes in a mathematical concentration index that are only theoretically tied to the potential to exercise market power. A more appropriate approach would involve modeling effects on the marketplace or changes in prices that consumers must pay: outcomes that consumers care about.

The FERC market power screen is modeled off of a system used in other,

more typical commodity markets like rental cars, office supplies, or video rental. Electricity markets are fundamentally different because of the unique aspects of the product, production methods and delivery. The concentration index does not take into account transmission pricing constraints, the extent to which other energy products or services could substitute for electricity, the complex interaction between the many geographically distinct but interconnected markets on the grid and the effect of barriers to market entry, among other complexities only present in the electricity sector.¹³⁶ The screen fails to fully account for these differences, and thus achieves only limited usefulness.

The FERC screen defines several “safe harbors” in which mergers and acquisitions are allowed.¹³⁷ However, these thresholds are arbitrary and do not necessarily indicate that there is no danger of market power abuse. William Baxter, a former Assistant Attorney General in charge of the Antitrust Division of the U.S. Department of Justice and originator of the concentration index, said that the level of the safe harbor for mergers was “as much a political anchorage ... as because anyone thought that nicely round number was right.”¹³⁸ Applied to the electricity market, the level of the safe harbor is doubly suspect.

In addition, FERC criteria for determining the geographic extent of a market are too narrow.¹³⁹ FERC defines a competitor as relevant if it can deliver product within 5 percent of the going market rate. This differential is not large enough, and may exclude Exelon-owned plants that could compete in PJM or in PJM-East under the right conditions, contributing to anti-competitive impacts.

FERC also does not provide any firm guidelines about how to take into account natural gas activities of merging electric-

ity companies.¹⁴⁰ Control of gas supply in a load pocket like PJM-East could create opportunities to abuse market power. Exelon summarily dismisses any potential for natural gas business activity to enhance market power in testimony.¹⁴¹

Finally, the number and type of products provided by generation companies has exploded, ranging from baseload energy supply, to peaking energy supply, to ancillary services, to power brokering, to pollutant emission offset credits and transmission congestion credits. In contrast, FERC relies on an overly simplistic view of the market. The screen guidelines only require the examination of three categories: non-firm energy, short-term capacity and energy, and long-term capacity and energy.¹⁴²

Exelon’s Virtual Divestiture Plan

No acquisition proposal has ever before included the idea of “virtual divestiture,” or selling the output of a plant under contract while retaining ownership of the plant and control over its operation.

For nuclear capacity in particular, virtual divestiture doesn’t differ substantially from the normal marketing of power plant output. Exelon runs its nuclear power plants at near-constant output levels for over a year at a time, serving baseload energy needs that remain relatively constant throughout the year. Baseload energy contracts are often drawn up for long periods well in advance of actual needs. Virtual divestiture would not change this situation significantly enough to mitigate Exelon’s increased market power.

In filings to FERC, the BPU cites numerous concerns with Exelon’s virtual divestiture plan:¹⁴³

- “Virtual divestiture does not ameliorate [Exelon’s] operational control over the units.”¹⁴⁴

- [Exelon] can hedge in the financial or FTR markets in advance of deciding to interrupt energy sales from these units.¹⁴⁵
- The terms of “virtual divestiture contracts” may place competitors in the wholesale market at a disadvantage.¹⁴⁶
- The process to make certain the capacity and energy remain subject to third party commercial control long-term is unclear.¹⁴⁷
- Competing generation owners cannot take advantage of any synergies of regional operations.¹⁴⁸
- The “virtual divestiture” does not create owners of the units, and “virtual ownership” falls far short of actual ownership. The “virtual owner” would not be entitled or motivated to upgrade facilities or long-term fuel supply arrangements.¹⁴⁹
- In real divestiture, FERC review is required before the divested utility may reacquire the divested generation. In contrast, “virtual divestiture,” the vertical full re-aggregation occurs automatically at contract term.¹⁵⁰
- By limiting actual divestiture, [Exelon] may be foreclosing competitors from reaching economies of scale [Exelon] hails as a major public benefit of their merger.¹⁵¹

Distributing Merger Savings Would Be A Temporary and Inadequate Fix

Another card Exelon may play in attempting to win regulatory approval of its plan could involve sharing “merger

synergies,” or the profits from economic efficiencies created by eliminating duplicative parts of the new company, cutting costs and increasing the output of New Jersey’s nuclear power plants. During a call with investor analysts, Exelon CEO John Rowe said, “We understand that time is money and as long as we don’t threaten our basic synergy analysis we are prepared to share a little in order to get an expedited result.”¹⁵² Exelon claims that these efficiencies will benefit New Jersey consumers as well as Exelon shareholders.

However, Exelon has not formally proposed sharing any of the economic efficiencies it expects to create with ratepayers. Even if Exelon did share the savings, they would amount to only a token decrease in electricity costs for the average residential electricity consumer, easily negated by the harmful impacts of reduced competition.

Rowe said that in New Jersey “three-quarters of the historic synergies in the regulated operation... are supposed to go to the ratepayer.”¹⁵³ Exelon claims that synergies in regulated business will total \$155 million by 2009, an annual savings of \$39 million in the first four years.¹⁵⁴ Assuming that regulators only have the power to force sharing of savings from regulated aspects of business, that Exelon reserves 75 percent of the synergies in their regulated businesses for ratepayers (\$29.25 million), and that all 9.1 million ratepayers in Exelon’s service territories benefit, the average customer will see a benefit of \$3.21 a year.

Homeowners and businesses make up 80 percent of PSE&G’s revenue base.¹⁵⁵ Excluding large industrial customers leaves smaller customers with savings of \$2.57 a year for the average residential and business customer—the equivalent of 21 cents per month, well under 1 percent of the average household electric bill.

New Jersey Regulators Should Reject the Proposed Takeover

Exelon’s takeover of PSEG can only proceed with approval from the New Jersey Board of Public Utilities (BPU).

When evaluating Exelon’s proposal, the BPU should apply a minimum standard of “public benefit,” defined broadly in terms of competition, rates, and the provision of safe, adequate service at just and reasonable rates.

Regulators must be absolutely confident that the takeover would not:

- Reduce meaningful competition in New Jersey’s electricity service auction or in the regional wholesale electricity market, harming consumers’ interest in affordable electricity supplies;
- Aggravate reliability and quality of service problems for New Jersey electricity consumers;
- Risk public safety due to aggressive management of New Jersey’s nuclear power plants; or
- Leave consumers vulnerable to the cost of risky business practices.

Regulators must not only be absolutely confident that the takeover would

do no harm—they must be able to see real benefits for consumers; changes that would lead to more affordable, reliable, and safe electricity service.

Given the many problems with the proposed takeover, the BPU should reject the proposal on the grounds that it does not serve the public interest.

Such a decision would not be without precedent. In the past year, Arizona and Oregon’s utility regulators stopped out-of-state businesses from buying local energy companies.¹⁵⁶ In each case, regulators applied the “public benefit” standard to the acquisition proposals, and found that customers would not be better off. Additionally, regulators refrained from proposing concessions to address problems with the deals in a piecemeal fashion, instead determining that the applicant alone bore the burden of designing the transaction and proving that it would benefit the public interest.

Similar action is warranted in this case. President Fox and other members of the New Jersey Board of Public Utilities should defend the interests of New Jersey’s electricity consumers and reject Exelon’s takeover of PSEG.

Appendix

Consumer Principles for the Electric System

New Jersey PIRG Law & Policy Center recommends the following general principles as guidance for decisions affecting New Jersey's electric system:

1) Preserving universal access to safe, reliable, affordable electricity service should remain a state and national goal.

2) The public interest must guide all decisions with regard to the electric system.

- The goal of electricity regulation should be to provide adequate, reliable service to consumers at the lowest cost—including “external” costs such as environmental, public health, and social and economic impacts. Ratepayers must only be required to pay for investments that serve a legitimate public need and that could not otherwise be met through lower-cost means.
- Electricity rates should be designed to promote economically efficient and socially responsible outcomes—including

energy efficiency, rate stability and the protection of low-income consumers.

- The public interest can only be preserved through an open, accountable regulatory system that is explicitly charged with safeguarding the public.
- An effective regulatory system must guarantee due process and freedom of access to relevant information, allow and encourage the participation of all stakeholders, and preserve a right of appeal.
- An effective regulatory system must balance the long-term and short-term needs of consumers, as well as the interests of various classes of consumers. To balance long- and short-term needs, system planning must take place in the public sphere, include ample opportunities for public participation, and explicitly consider resource, political and environmental constraints. To balance the interests of various consumer classes, regulators must encourage broad participation in decision-making and ensure that

the views of small consumers are adequately represented in the process.

3) Market mechanisms should be employed when they benefit the public interest and supplanted by regulatory decision-making when they do not.

- The conditions for effective and fair markets in the electric industry—particularly in the transmission and distribution of power and the sale of electricity to small consumers—do not currently exist and are unlikely to exist in the foreseeable future. Regulation of rates and terms of service in these areas of the industry (and perhaps others) is necessary to protect the public interest.
- Where market mechanisms are established, consumers’ basic rights must be protected. These include the right to choose an electricity provider, to switch providers in a timely and convenient manner, and to receive accurate and timely information about rates and service.
- Where market mechanisms are established, government retains a role in ensuring that markets operate fairly. This includes the need to prevent the accumulation and exercise of market power and to safeguard consumers’ collective investments in the electric grid.
- The interests of consumers cannot be abandoned during any “transition” from regulated to open markets. Consumers should not be subjected to higher-than-warranted rates in order to encourage the entry of competitive suppliers to the market.

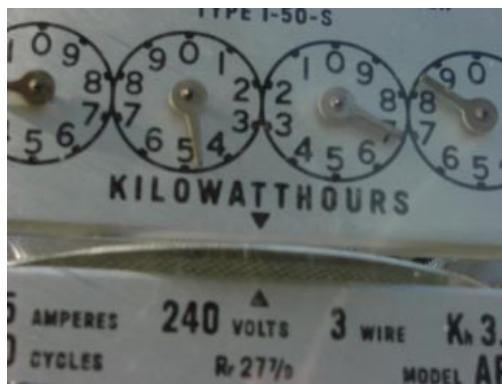
- Consumers must retain the ability to pool their resources through cooperatives or municipal governments in order to negotiate better rates and service or to provide power themselves.
- Private, unregulated entities must not be permitted to shift costs or risks to the regulated entities that serve consumers. Similarly, ratepayers must not be forced to make infrastructure investments that primarily serve private interests.

4) Decisions with regard to the electric system should be made at the level of government most accessible and responsive to the public, keeping in mind the need for broader coordination across jurisdictional boundaries.

- Ideally, decisions should be made at the lowest level of government possible, in order to maximize the public’s ability to participate in the decision-making process and hold decision-makers accountable to public interest goals.
- All levels of government must engage in comprehensive energy and electricity planning that establishes a long-term vision for the nation’s energy future. Such plans should be developed in public and invite participation from all stakeholders.
- New structures may be required to allow democratic governance of regional energy pools and markets in order to bridge the gap between national and state decision-making.

5) Improved energy efficiency and increased use of renewable resources are in the long-term national interest and often have short-term benefits for consumers. Government policy should actively promote the development and use of these resources.

- Market and regulatory barriers that deter the use of energy efficiency, renewable energy, or distributed generation technologies should be removed.
- The long-term benefits of these technologies must be considered in system planning, ratemaking and other regulatory decisions.



A Note On Electricity Units

Megawatts (MW) are the standard measure of a power plant's generating capacity, or the amount of power it could produce if operating at full speed. Utilities measure their ability to supply demand on the grid at any one time in terms of MW. One MW equals 1,000 kilowatts (kW). One thousand MW equals one gigawatt (GW).

Power plant output and electricity consumption over a fixed length of time are measured in terms of megawatt-hours (MWh). For example, a 50 MW power plant operating at full capacity for one hour produces 50 MWh of electricity. If

that plant operates for a year at full capacity, it generates 438,000 MWh of electricity (50 MW capacity x 8,760 hours/year). To give a sense of scale, an average household uses about 10 MWh of electricity each year.

Most plants do not operate at full capacity all the time; they may be shut down for maintenance or they may be operated at only part of their maximum generating potential because their power is not needed or their power source (such as wind) is not available. The actual amount of power that a plant generates compared to its full potential is reported as its capacity factor. Thus a 50 MW plant with a 33 percent capacity factor would produce 144,540 MWh of electricity in a year (50 MW x 8,760 hours/year x 33% capacity factor).

Notes

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(see Office of Management and Budget, *Fiscal Year 2006 Budget in Brief, Acting Governor Richard J. Codey*, 1 March 2005, 1).

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14. Diana L. Moss, *Electricity and Market Power: Current Issues for Restructuring Markets (A Survey)*, 4 March 2005, 5; J. Kwoka, *Unilateral Withholding: Market Power and California's Electricity Crisis*, GWU Center for Economic Research, Discussion Paper 01-01, May 2001.

15. United States General Accounting Office, *Restructured Electricity Markets: California Market Design Enabled Exercise of Market Power*, GAO-02-828, June 2002; Paul L. Joskow and Edward Kahn, Massachusetts Institute of Technology and Analysis Group/Economics San Francisco, *A Quantitative Analysis of Pricing Behavior in California's Wholesale Electricity Market During Summer 2000: The Final Word*, 4 February 2002.

16. John Kwoka, Northeastern University, *Foresight, Hindsight, and Market Power in the Restructured Electricity Sector*, Remarks Presented at the AAI Third Annual Energy Roundtable Workshop, Arlington VA, 21 January 2003.

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24. See Note 17.

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28. PJM Interconnection, Market Monitoring Unit, *2004 State of the Market*, 8 March 2005.

29. Ibid: "Concentration ratios are a summary measure of market share, a key element of market structure. High concentration ratios indicate comparatively smaller numbers of sellers dominating a market, while low concentration ratios mean larger numbers of sellers splitting market sales more equally. High concentration ratios indicate an increased potential for participants to exercise market power, although low concentration ratios do not mean that a market is competitive or that participants cannot exercise market power. Analysis of the PJM Energy Market indicates moderate market concentration overall. Further, analyses of supply curve segments indicate moderate concentration in the baseload segment, but high concentration in the intermediate and peaking segments. Analysis also indicates that the ComEd Control Area was highly concentrated overall and in each segment of the supply curve. Several other geographic areas of PJM exhibited moderate to high levels of concentration when transmission constraints defined local markets. No evidence exists, however, that market power was exercised in these areas during 2004, both because of generator obligations to serve load and because of PJM's rules limiting the exercise of local market power."

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41. See Note 38.
42. See Note 39.
43. See Note 31.
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47. See Note 38.
48. See Note 31.
49. Revenues were \$14.5 billion in 2004 and \$15.8 billion in 2003; See Notes 38 and 39.
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51. Net Income was \$726 million in 2004 and \$1.16 billion in 2003; See Note 31.
52. For the year 2004; See Note 38.
53. See Note 39.
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55. Ibid.
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60. See Note 38.
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127. See Note 125.
128. New Jersey Board of Public Utilities, "Direct Testimony of Rodney Frame on Behalf of Public Service Electric and Gas Company," *In the Matter of the Joint Petition of Public Service Electric and Gas Company and Exelon Corporation For Approval of a Change in Control of Public Service Electric and Gas Company, and Related Authorizations*, JP-6, February 2005.
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136. See Note 17.
137. FERC defines the safe harbor for mergers

as 1) mergers in which the post-merger concentration index is less than 1,000, 2) mergers in which the post-merger concentration index is between 1,000 and 1,800 and the merger induces an increase of no more than 100, and 3) mergers in which the post-merger concentration index is higher than 1,800 but the merger causes an increase of no more than 50.

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