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**Bad Economics, by Any Other Name, is Still Bad:
APPA's Analysis of
Wholesale Electric Competition is Flawed**

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EXECUTIVE SUMMARY

On June 1, the American Public Power Association (APPA) issued yet another report that “proves” wholesale competition in the electric industry has been a bad deal for electric consumers. This newest APPA report, “The Deregulation Penalty: Losses for Consumers and Gains for Sellers,” written by Edward Bodmer,² purports to show that competitive electric generating companies have earned “excess profits” at the expense of retail consumers. Mr. Bodmer’s study compares the earnings of competitive generating companies with those of monopoly utilities, concluding that, because the former’s earnings are greater than the latter, electric consumers have suffered. This is the supposed “deregulation penalty” the report focuses on. In fact, no such penalty exists.

Retreading many of the same arguments that have been rejected by the Federal Energy Regulatory Commission (FERC) for well over a decade, the APPA report uses incorrect and incomplete data to retell the story that competition and choice are somehow bad for American consumers and that companies are over-earning at the expense of consumers.

The APPA report is flawed in many respects. Some of these flaws are analytical. For example, the report’s author relies on a highly skewed set of companies and applies “apples-to-oranges” comparisons to “prove” his conclusions. Moreover, there are numerous mathematical and accounting errors in the report. But most importantly, the APPA report perpetuates two fundamental economic errors:

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² Last year, APPA issued a similar report written by Mr. Bodmer, “The Electric Honey-pot: the Profitability of Deregulated Electric Generating Companies.” As with this new report, Mr. Bodmer’s previous report attempted to demonstrate that generating companies were profiting at the expense of consumers.

- (1) That market competition is a zero-sum game, in which any and all profits earned by suppliers are losses inflicted on consumers; and
- (2) That there is no link whatsoever between the business and financial risks a firm takes and the returns its investors expect.

The APPA report contains multiple occurrences of the wrong data being used to make incorrect financial calculations. These fundamentally invalidate the report's purported conclusions. For example, among the most egregious errors is the report's use of corporate parent earnings data, instead of generating subsidiary data, thus grossly overstating cash flows for several competitive generating companies by as much as 300%. Other obvious accounting errors are:

- Including the value of "goodwill" for the competitive generating firms but excluding it for monopoly utilities, while adding back write-offs of "impaired" assets by competitive generating firms;
- Including "regulatory assets" to estimate monopoly utilities return on equity.
- Failing to include capital investments in free cash flow calculations.
- Improperly treating as a variable operating expense the cost of nuclear fuel, which should be treated as a capital investment.

Contrary to the APPA report's fundamental premise, competition is not, and never has been, a zero-sum game: robust competition benefits both producers and consumers. If, as APPA claims, supplier profits mean consumer losses, then competitive markets wouldn't exist for any good or service, whether corn, computer chips, or copper. But markets do exist, and for good reason: they are proven to improve efficiency, reduce costs, and promote innovation. Indeed, providing U.S. consumers with these benefits was a fundamental reason Congress introduced competition into wholesale electric markets, just as it had done previously for many other markets, including natural gas, trucking, railroads, airlines, and telephones.

Like all monopolies, electric monopolies had little incentive to operate more efficiently or innovate. Just like the old AT&T sold "plain old telephone service," electric utilities sold "plain old electric service." However, unlike the telephone industry, mistakes in the electric industry could—and did—cost billions, especially huge cost overruns to build new generating plants and lackluster operation of existing ones. Retail consumers paid those costs. Unless a monopoly utility did something that was either imprudent or illegal, cost overruns were passed on to captive ratepayers.

By better aligning risk and reward, competitive markets benefit both consumers and producers. A fundamental premise of wholesale electric generation competition, which began in earnest with the Energy Policy Act of 1992, and electric industry restructuring, which began a few years later, was to realign risks to those best able to manage them, and unleash the discipline of competitive markets. It has worked. In a restructured electric industry, competitive generators have strong market incentives to keep their costs low and production high. Southwest Airlines provides a great example. Innovation has allowed the company to reduce its labor and fuel costs, provide high levels of customer satisfaction and low ticket prices, and consistently rank as one of the most profitable U.S. airlines. Reduced costs and greater production have meant lower market prices for consumers. Moreover, unlike utility monopolies, competitive generators cannot simply pass on cost overruns to captive consumers, as monopoly utilities can. When competitive wholesale generating firms have been forced into bankruptcy, investors—not retail consumers—have paid the price. This is precisely how competitive markets are supposed to work, by aligning the risks and the rewards efficiently. Yet, the APPA report ignores the greater financial risks competitive generating firms face.

Investors, whether in competitive or monopoly companies, require that risk and reward be balanced. Investors expect to be compensated for the risks they are asked to bear. That’s true for all investments, whether in competitive firms or utility monopolies. Monopoly electric utilities typically earn lower returns than competitive companies, because the former is regulated with a captive customer base. As long as regulators are fair, those utilities are guaranteed a “risk-comparable” return.³

In competitive markets, there are no such guarantees. Consider, for example, Apple Computer, which has been highly profitable over the last few years. During that time, the company took huge financial risks, spending hundreds of millions of dollars to develop innovative products consumers wanted such as the iPod™ and iPhone™. These products have been highly successful, but had they failed, Apple investors, not consumers, would have borne the massive financial loss. Consumers who have bought those products have not been harmed because Apple made a profit. Yet, applying APPA’s flawed logic, consumers have been harmed and have overpaid because Apple earned high profits.

Electric consumers haven’t lost because of competition; they have benefited. Contrary to APPA’s assertion, the percentage increases in retail rates between 1997 and 2008 in monopoly

³ This concept was enshrined by the U.S. Supreme Court 75 years ago, in *Federal Power Commission v. Hope Natural Gas*, 320 U.S. 591 (1944).

states without regional competitive wholesale markets have been greater than in competitive markets. Competitive generation owners have invested billions to upgrade existing generating state, increase generation output, lower operating costs, and build new generating plants. Some of these firms have profited from those investments, like other successful competitive firms. But others failed and were forced into bankruptcy. In all cases, retail customers bore none of the risk.

If we recreate the same electric monopolies that historically shackled electric utility customers with cost overruns and poor operating performance, as APPA wants, then electric consumers will lose, not gain. That's not what America needs, especially now.

1. INTRODUCTION

On June 1, the American Public Power Association (APPA) issued yet another report that “proves” wholesale competition in the electric industry has been a bad deal for electric consumers. This newest APPA report, “The Deregulation Penalty: Losses for Consumers and Gains for Sellers,” prepared by Edward Bodmer,⁴ purports to show that competitive electric generating companies have earned “excess profits” at the expense of retail consumers. The APPA report presents comparisons of the earnings of monopoly companies with those of competitive ones, concluding that, because the former’s earnings are greater than the latter, electric consumers have suffered.⁵ This is the supposed “deregulation penalty” the report focuses on, when in fact no such penalty exists.

The APPA report is flawed in many respects. These flaws include using a limited set of companies and invalid “apples-to-oranges” comparisons to “prove” its conclusions. Moreover, there are numerous mathematical and accounting errors in the report, such as mischaracterizing parent company financial data as that of its generating subsidiary. But most importantly, the APPA report perpetuates two fundamental economic errors:

- (1) That market competition is a zero-sum game, in which any and all profits earned by suppliers are losses inflicted on consumers; and
- (2) That there is no link whatsoever between the business and financial risks a firm takes and the returns its investors expect.

Competition is not a zero-sum game: by better aligning risk and reward, robust competition benefits both producers and consumers. If, as APPA claims, supplier profits are consumer losses, then competitive markets wouldn’t exist for any good or service, whether corn, computer chips, or copper. But markets do exist, and for good reason: they are proven to improve efficiency, reduce costs, and promote innovation. Indeed, providing U.S. consumers

⁴ Last year, APPA issued a report written by Mr. Bodmer, “The Electric Honey-pot: the Profitability of Deregulated Electric Generating Companies.” As with this new report, Mr. Bodmer’s previous report attempted to demonstrate that generating companies were profiting at the expense of consumers.

⁵ The APPA Report incorrectly uses the terms “deregulated” and “unregulated,” completely ignoring the fact that “deregulated” electric generating firms are subject to vigorous economic regulation, including (1) meeting stringent Federal Energy Regulatory Commission (“FERC”) requirements in order to charge market-based rates; and (2) market power mitigation rules in organized regional markets, such as those managed by PJM Interconnection, L.L.C., the independent regional transmission organization for the mid-Atlantic region. In this report, I use the more accurate terms “competitive” and “monopoly,” instead of “regulated” and “deregulated.”

with these benefits was a fundamental reason Congress introduced competition into wholesale electric markets, just as it had done previously for many other markets, including natural gas, trucking, railroads, airlines, and telephones.

Like all monopolies, electric monopolies had little incentive to operate more efficiently or innovate. Just like the old AT&T sold “plain old telephone service,” electric utilities sold “plain old electric service.” Unlike the telephone industry, however, electric industry mistakes could—and did—cost billions, especially huge cost overruns to build new generating plants and lackluster operation of existing ones. And who paid those huge costs? Retail consumers. Unless a monopoly utility did something that was either imprudent or illegal, cost overruns were passed on to captive ratepayers.

It is because utility monopolies receive guaranteed returns that they face far lower risks than competitive firms. Under the old monopoly electric utility regime, construction cost overruns and the poor operational performance caused cost-of-service, electric rates to soar, long before there were any competitive generating firms. Unless a utility was shown to have been grossly negligent or imprudent, all of those costs were simply passed on to captive customers. Utility investors bore little risk.

Although the APPA report criticizes the higher returns earned by competitive wholesale generators, it omits any discussion of the far greater risks those firms undertake, and the potential consequences of those risks – including bankruptcy and massive financial loss. As even the APPA report concedes, “complications related to goodwill, write-offs, bankruptcy, capital structure changes and other factors generally do not arise for monopoly utilities.”⁶ Of course, one reason many of those complications do not arise is because monopoly utilities’ customers bear those risks, rather than the utilities’ investors.

A fundamental premise of wholesale electric generation competition, which began in earnest with the Energy Policy Act of 1992, and of electric industry restructuring, which began a few years later, was to realign financial risks to those best able to manage them and unleash the discipline of competitive markets. It has worked. In a restructured electric industry, competitive generators have strong market incentives to keep their costs low and production high. Reduced costs and greater production have meant lower market prices for consumers.

⁶ APPA Report, p. 5.

Surprisingly, the APPA report ignores this risk realignment, under which competitive wholesale generating firms have assumed the financial and operating risks that retail customers used to bear. The APPA report also biases its analysis and comparisons by eliminating competitive firms that have gone bankrupt.⁷ Thus, rather than address the very real financial risks faced by competitive generating firms – including bankruptcy – the APPA report ignores those risks. Yet, when competitive firms were forced into bankruptcy, investors—not consumers—paid the price. This risk realignment was a key goal of restructuring, and is precisely how competitive markets are supposed to work: by efficiently aligning the risks and the rewards.

In the next two sections of this response, I explain in more detail why the APPA’s two premises about market competition and risk are flawed. In section 4, I point out a number of data errors that invalidate many of the financial comparisons in the report. Section 5 provides some concluding remarks.

2. COMPETITION BENEFITS CONSUMERS AND SUPPLIERS

The basic premise of the APPA report is that consumers lose whenever companies succeed. This is incorrect. Competition is not, as the APPA report implies, a zero-sum game. Rather, in all competitive markets the impetus for profits drives suppliers to invest, improve, and innovate, all of which benefit consumers through lower prices and new products. Southwest Airlines provides a great example. Innovation has allowed the company to reduce its labor and fuel costs, provide high levels of customer satisfaction and low ticket prices, and consistently rank as one of the most profitable U.S. airlines.

In competitive markets, there are no guaranteed profits. Consider Apple Computer, a company that has been highly profitable over the last few years. The company took huge financial risks, spending hundreds of millions to develop innovative products consumers wanted such as the iPod™ and iPhone™. These products have been highly successful, but had they failed, Apple investors, not consumers, would have borne the massive financial loss. Have the millions of consumers who bought those products been harmed because Apple made a profit? Of course not. Yet, applying the APPA report’s zero-sum logic, consumers must have been harmed and must have overpaid for iPods and iPhones because Apple earned high profits.

⁷ For example, the APPA report states that no average return on equity was calculated for the group competitive generating companies “because of the distorting effects of the bankruptcy of NRG and Mirant on the computed returns” (p. 7).

The report fails to recognize that innovation and improved efficiency benefits both consumers and shareholders. For example, suppose a competitive electric generator improves its operating efficiency and reduces its costs by 10%, while selling power at the same market price.⁸ Applying the APPA's methodology, because the competitive firm improved its profitability by reducing operating costs, electric consumers would have paid a "deregulation penalty," even though the market price did not change. In fact, if the efficiency improvements led to a 5% reduction in market price, the APPA's approach would still conclude that consumers paid an economic penalty. This makes no sense, as it implies that consumers benefit when firms' costs increase and profitability decreases.

Congress introduced market competition into wholesale electric markets to provide consumers greater efficiency, lower costs, and innovation, just as it had done successfully for many other markets, including natural gas, trucking, railroads, airlines, and telephones. The case of natural gas (see Box, below) is particularly interesting because by the late 1960s, the conventional wisdom was that natural gas supplies would soon be exhausted. Decontrolling prices and introducing market competition unleashed a surge of new exploration and development, and technological innovation allowing companies to discover new supplies in locations that would have been unimaginable years earlier.

Just as in those other industries, electric consumers haven't lost because of competition; they have benefited. Competitive generation owners have invested billions to upgrade existing generating plants, increase output, lower operating costs, and build new generating plants. There have been numerous academic studies that have compared increases in operating efficiency for plants owned by competitive generating firms versus plants still owned by traditionally regulated investor-owned and public utilities.⁹ For example, one study found that

⁸ A competitive firm is too small to influence market prices through its own actions.

⁹ There is a growing academic literature on the benefits of electric restructuring and empirical evidence of those benefits. See, e.g., M. Barmack, E. Kahn and S. Tierney, "A Cost-Benefit Assessment of Wholesale Electricity Restructuring and Competition in New England," *Journal of Regulatory Economics*, 31:151–184 (2007), <http://www.springerlink.com/content/526177i6706n52ng>; K. Fabrizio, N. L. Rose and C. D. Wolfram, "Do Markets Reduce Costs? Assessing the Impact of Regulatory Restructuring on US Electric Generation Efficiency," *American Economic Review*, 97:1250-1277 (2007), http://web.mit.edu/ceepr/www/publications/reprints/Reprint_185_WC.pdf; J. K. Shanefelter, "Restructuring, Ownership and Efficiency: The Case of Labor in Electricity Generation," University of California Energy Institute, Center for the Study of Energy Markets, Working Paper WP-161 (2006) <http://www.ucei.berkeley.edu/PDF/csemwp161.pdf>; Bushnell, J., and C. Wolfram, "Ownership Change, Incentives and Plant Efficiency: The Divestiture of U.S. Electric Generation

“plant operators most affected by restructuring reduced labor and nonfuel expenses, holding output constant, by 3 to 5 percent relative to other investor-owned utility plants, and by 6 to 12 percent relative to government- and cooperatively owned plants that were largely insulated from restructuring incentives.”¹⁰

Case Study: How Competition Boosted Natural Gas Supplies

In the 1960s, many believed the U.S. had less than 10-years’ supply of natural gas. Prior to restructuring of the natural gas industry, natural gas wellhead prices were fully regulated. Natural gas supplies began to decrease. Because of its capital intensiveness, new investment and growth of the industry came to a standstill. Estimated natural gas reserves had peaked in 1967 and were falling steadily, as was total production. Shortages developed, and service curtailments began, especially for industrial consumers. In the late 1970s, Congress passed a series of energy bills designed to address the natural gas shortage, including creating a special class of small, non-utility generating firms that would develop renewable power supplies. Most importantly, Congress set in motion the complete restructuring of natural gas prices, which reduced prices and turned an impending supply “crisis” into a supply “glut” in the 1990s.

In PJM, lower operating costs and greater plant availability have increased electric supplies and lowered costs, benefiting consumers. Contrary to the APPA report’s claims that no new generation is being built, over 10,000 MW of new capacity has been committed for 2012, including 7,000 MW of customer demand response (an over 500% increase from the previous capacity market auction), along with substantial commitments to energy efficiency and renewable resources.

The result of these efficiency gains has been lower rates for electric customers. Since 1997, electric rates in competitive markets have increased less than those in monopoly markets. As shown in the table below, based on data published by the U.S. Energy Information Administration (EIA), residential electric rates in states that restructured and participate in regional transmission organizations (RTOs) increased an average of 33%, while rates in unstructured non-RTO states increased an average of 38%.¹¹ Adjusting for inflation over that

Plants,” California Energy Institute, Center for the Study of Energy Markets, CSEM-WP-140, March 2005. Available at: <http://www.ucei.berkeley.edu/>.

¹⁰ Fabrizio, et al., *op. cit.*, p. 1251.

¹¹ These data compare rates for states that participate in RTOs and have competitive wholesale power markets with non-RTO states.

same period, about 34%, residential electric rates in states that participate in RTO's were lower in 2008 than they were in 1997.

<u>Retail Rate % Changes</u>		
(1997 – 2008)		
	<u>All Sectors</u>	<u>Residential</u>
RTO States	42%	33%
Non-RTO States	46%	38%

- Based on EIA Data
- RTO States include : CA, CT, DE, IL, MA, MD, ME, NH, NJ, NY, RI, TX, DC, MI, OH, PA, IA, KY, IN, MN, MO, ND, VA, VT, WI, and WV (26 States)

Moreover, it is not only businesses that value competition. Nationally, key environmental leaders and policy organizations have recognized that competitive markets are crucial to improving environmental quality and reducing greenhouse gas emissions. For example, on May 6, 2009, the Environmental Defense Fund and the COMPETE Coalition issued a joint statement about competition and the environment, which said

Markets have proven to be the most cost efficient and effective means to deliver goods and services to consumers and will bring the same benefits to help achieve the policy goals of federal climate legislation.

Market forces will ensure that investments are made in the right places with cleaner, more efficient and innovative technologies. For that reason, we believe that well-structured competitive electricity markets offer the most benefit to consumers, our economy and the environment.¹²

3. ALL INVESTORS EXPECT RETURNS THAT ARE COMMENSURATE WITH RISK

Investors of both competitive and monopoly ventures require that expected returns be commensurate with the firm's business and financial risks. This principle was enshrined for traditionally regulated firms by the U.S. Supreme Court 75 years ago in a well-known opinion,

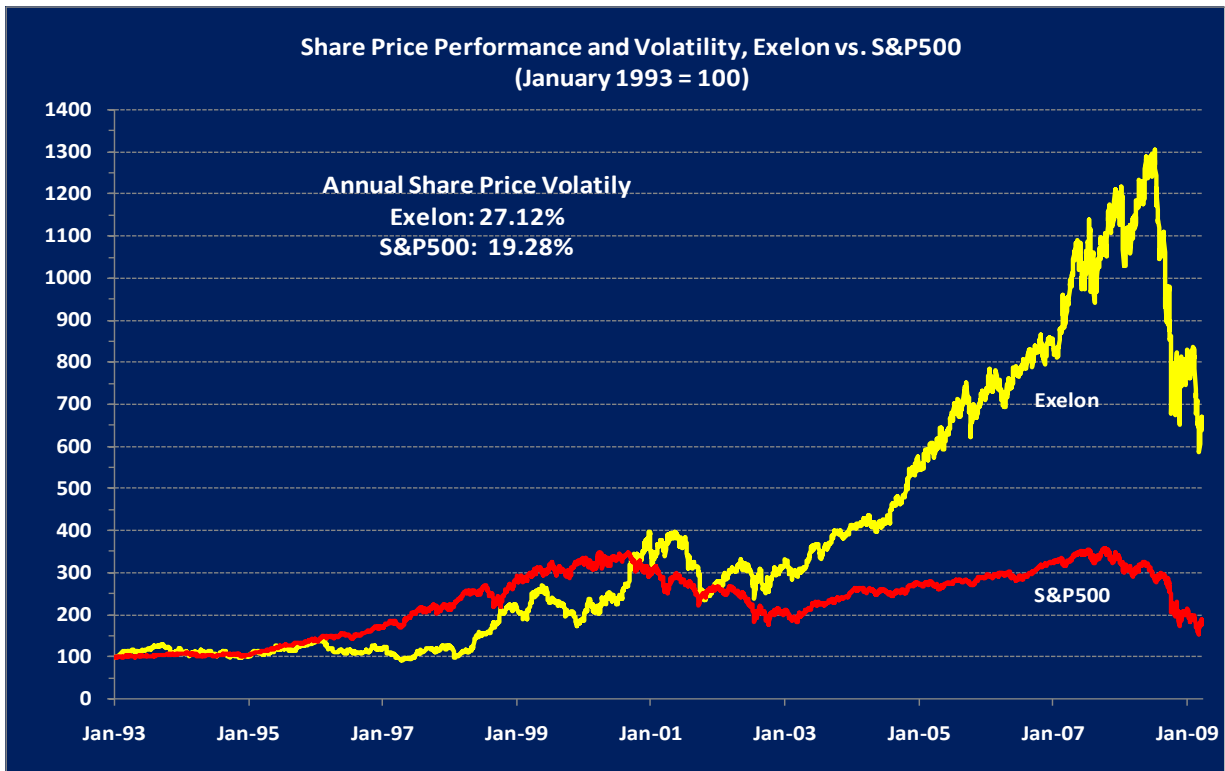
¹² EDF – COMPETE Joint Statement, May 6, 2009, p. 1. Available at: <http://www.competecoalition.com/files/EDF%20COMPETE%20Joint%20Statement%20FINAL.pdf>.

Hope Natural Gas.¹³ In its opinion, the Court said that returns to investors in traditionally regulated firms must be comparable to other firms facing similar risk levels. Ever since, that case has guided how state and federal regulators establish allowed returns for all traditionally regulated utilities in the U.S.

Since traditionally regulated utilities can, as a rule, simply pass along unexpected increases in costs to their customers, they bear much less risk than competitive generating companies, which cannot pass along those costs. That's why regulators typically set allowed returns for monopoly utilities at levels lower than those in competitive markets. It's also why utility stocks were often called "widow and orphan" stocks: the returns and dividends utilities paid were stable year after year.

The APPA report's conclusions ignore the critical difference in the levels of risk (as measured by the volatility of share prices) faced by monopoly utilities and competitive generation firms. Yet, these risk differences are evident in Appendix B of the APPA report. That appendix provides numerous charts comparing the returns for the S&P500 as a whole, a select group of monopoly utilities, and large competitive generating companies in PJM that the report accuses of making unfair profits. For example, the chart on the next page compares share price performance and volatility of returns between Exelon Corporation and the S&P500, for the period January 1993 – March 2009.

¹³ *Federal Power Commission v. Hope Natural Gas*, 320 U.S. 591 (1944).



The APPA report focuses exclusively on share price increases, such as for Exelon (the yellow line in the chart) relative to the S&P500 (the red line), but ignores share price volatility.¹⁴ In essence, APPA concludes that, because stock prices for the companies with competitive generating subsidiaries that the report analyzed (again, ignoring firms that declared bankruptcy) increased faster than the S&P500 between 1993 and 2009, these companies' shareholders profited off the backs of consumers. However, the APPA report ignored the greater financial risk faced by those companies' shareholders, which is typically measured in terms of share price volatility.¹⁵

For example, the average annual share price volatility for Exelon Corporation between 1993 and 2009 was 27.12%, whereas the volatility of the S&P500 was only 19.28% over that same period. Thus, holding Exelon stock has been riskier than holding a broad market index like the S&P500. Moreover, as the chart above shows, although the price of Exelon's stock rose faster than the S&P 500, it also dropped much farther and much faster after the beginning of the

¹⁴ The APPA report also showed returns for a "distribution utility" index. However, this index not only includes monopoly electric utilities, but also natural gas and water utilities.

¹⁵ Volatility is a measure of how much the returns from holding a stock vary over time. For example, a stock whose price increases 10% one day, then decreases 20% the next, and increases 15% the next is more volatile than a stock whose price never changes more than 1% from day-to-day.

financial crisis in mid-2008—halving in value 60% between July and November 2008. A similar pattern holds for the other competitive generating firms used in the report, all of which have greater volatility of returns than the monopoly utility group.

No investor will buy stock in any company whose expected returns are the same or less than those of a less risky firm. That concept, the inherent tradeoff between risk and expected return, is one of the most fundamental concepts in finance. It is why some individuals invest in stocks, while others stick to the safety of Treasury bonds. It is why AAA-rated bonds carry lower interest rates than so-called “junk” bonds.

Unlike monopoly utilities, when competitive generating firms make investments, their investors assume the risks, not their customers. Reducing the risks borne by utility consumers was one of the primary goals of electric competition. Before the introduction of competition, utility consumers paid for multi-billion dollar construction cost overruns at generating plants. Utility consumers had paid for poor operating performance and expensive repairs. Monopoly utilities could claim that those costs were all beyond their control. Unless the cost increases were found to be the result of managerial incompetence, regulators allowed those costs to be passed on to captive ratepayers. Today, competitive generating firms bear all those cost risks, as well as market price risks. While some competitive generating firms have prospered, others have been forced into bankruptcy.

Case Study: The Calvert Cliffs Nuclear Generating Station

Constellation purchased the Calvert Cliffs Nuclear Generating Station in 1999, even though a January 15, 1999 report prepared by Synapse Energy Economics for the Citizens Action Coalition concluded that the ongoing financial risks posed by nuclear plants were significant.¹⁶ The report, which was prepared a few months before Maryland undertook electric restructuring, cited a number of studies concluding that a significant fraction of U.S. nuclear plant capacity was at risk for early retirement because of above-market costs, stating:

[e]lectric market deregulation is creating an environment where it is increasingly difficult to continue operating uneconomic plants. While some subsidies to nuclear plant operation have been provided for in "transition" plans, the pressure to mitigate stranded generation costs by closing uneconomic nuclear plants is considerable ... recent analyses of this question have found that a significant portion of the nuclear fleet is at risk of shutting down on the basis of

¹⁶ See, Synapse Energy Economics, “Stranded Nuclear Waste: Implications of Electric Industry Deregulation for Nuclear Plant Retirements and Funding Decommissioning and Spent Fuel,” January 15, 1999. Available at: <http://www.citact.org/nucprep.html>.

poor operating economics. For example, Geoffrey Rothwell (1998) analyzes the economics of the nuclear fleet using econometric estimates to simulate costs in a probabilistic comparison with electricity market prices. He concludes that "if costs are not reduced, there are approximately two dozen units at risk of early retirement before 2006, when nuclear power unit operating licenses begin to expire"¹⁷

The authors of that report presented their own analysis of nuclear plants at risk of early shutdown. They performed a scenario analysis to evaluate the economics of U.S. nuclear plants under "Low," "Reference," and "High" generation cases, each having different assumptions about nuclear plant operating costs, decommissioning costs, and market prices of electricity. They determined that,

In the low case, we find that most of the existing fleet of nuclear units is uneconomic to operate, and should be closed. ... In the high case, with very optimistic assumptions for nuclear plant costs and performance, we still find 20 nuclear units to be uneconomic to operate.¹⁸

In fact, under the authors' "Low" case scenario, their analysis showed that Calvert Cliffs would be uneconomic to operate as of the year 2000.¹⁹ This was consistent with the low prices paid for nuclear power plants at the time. Buyers were concerned about the risks they were taking on, based on historic poor operating performance, as well as the competition from highly efficient gas-fired generating plants that were being built to take advantage of forecasts of continued low natural gas prices.

Despite the huge financial risks, Constellation invested in Calvert Cliffs without any guarantee of cost recovery. Constellation invested over \$500 million in plant upgrades to increase the plant's generation output and reduce downtime. No state or federal regulator determined that Constellation could put those costs into rate base. Rather, Constellation's investors shouldered—and still do so today—the risk that the investment would not pay off. Similarly, Exelon Corporation has spent billions investing in and improving operations for its fleet of nuclear plants. But, under the logic of the APPA report, the returns earned by Constellation's and Exelon's investors, and the returns earned by other investors whose decisions to invest in high-risk generating assets paid off, are all "ill-gotten gains" that have come at the expense of consumers.

¹⁷ *Id.*, Section 2.2 (unpaginated).

¹⁸ *Id.*, Section 2.4, (emph. added).

¹⁹ *Id.*, Table A.3.

4. THE APPA REPORT MAKES INVALID “APPLES-TO-ORANGES” COMPARISONS

The APPA report attempts to demonstrate that electric consumers have suffered because a skewed group of competitive wholesale generators earned higher returns than a carefully selected group of monopoly utilities. As I discussed in Section 2, this “zero-sum game” concept is fundamentally wrong. Moreover, the higher returns earned by some competitive wholesale generators (and the bankruptcy declarations of others) are consistent with the far greater business and financial risk their investors take. Additionally, the report ignores that, between 2001 and 2008, two of the four electric utilities used by APPA (PPL and the PECO subsidiary of Exelon), had retail electric rates that were capped, as required under Pennsylvania’s restructuring law. A third utility, Exelon’s Commonwealth Edison subsidiary, had its electric rates reduced and then frozen between 2001 and 2007, as required under Illinois’ restructuring legislation. Thus, under any circumstances, the source of the allegedly “excessive” equity returns APPA claims could not have been from higher prices paid by consumers.

In addition to these economic errors, many of the actual financial comparisons used are flawed, such as:

- Using financial data for the parent company instead of for the competitive generation subsidiary to estimate the competitive generator’s cash flows and investment returns.
- Failing to include capital investments in free cash flow calculations.
- Improperly treating as a variable operating expense the cost of nuclear fuel, which should be treated as a capital investment.
- Including the value of “goodwill” for the competitive generating firms but excluding it for monopoly utilities, while adding back write-offs of “impaired” assets by competitive generating firms;
- Including “regulatory assets” to estimate monopoly utilities return on equity.

Accounting Errors

The APPA report contains multiple occurrences of the wrong data being used to make incorrect financial calculations. These errors invalidate the report’s purported conclusions.

Consider, for example, the Cash Flow from Operations results shown in Table 9 (p. 13) of the report. In 2008, Exelon Generation is reported to have \$6,551 million in cash flow from operations, while all of Exelon Corporation has \$7,050 million in cash flow from operations. These numbers imply that, collectively, the other companies comprising Exelon Corporation,

including its two electric utilities—Commonwealth Edison and PECO—managed to generate less than \$450 million in cash flow.

In fact, the reported cash flows from operations for Exelon’s generating segment are for the parent company, not the competitive generation subsidiary. For the years 2006 – 2008, Table 9 reports cash flow from operations data for all of Exelon (the parent company), rather than the generating subsidiary. As can be seen on page 139 of Exelon Corporation’s 2008 Form 10-K, Exelon Generation’s cash flows from operations were \$4,445 million, over \$2 billion less than what is reported in Table 9 of the APPA report. For the three year period, APPA’s overstatement of cash flows from operations for Exelon Generation is almost \$6 billion, or 60%.²⁰

The report also makes errors in reporting cash flow data for PSEG. All the cash flow numbers reported for PSEG’s competitive generating subsidiary, PSGE Power, are incorrect and higher than they actually were in each year.²¹ For the years 2006 - 2008, APPA’s overstatement of cash flows from operations for PSEG Power is over \$2.5 billion, or 65%.

Similarly, the Free Cash Flow results shown in Table 10 of the APPA report (p. 14) fail to include capital expenditures in their calculations. Those capital expenditures, all of which are at risk, reflect the huge amounts being reinvested in the generation facilities. In total, when capital expenditures are included for Exelon Generation between 2003 and 2008, the Free Cash Flow results are overstated by \$13.4 Billion, an error of almost 300%.

These are just a few examples of basic calculation errors in the APPA report analysis. In conjunction with the more fundamental economic errors (i.e., treating market competition as a zero-sum game and completely ignoring the greater financial risks faced by competitive generation firms in comparison to monopoly utilities), the APPA report’s conclusions are not valid.

²⁰ The correct cash flow from operations values for Exelon Generation for the years 2006, 2007, and 2008 are \$2,550 Million, \$2,994 million, and \$4,445 million, respectively. The APPA report uses the values for all of Exelon Corporation: \$4,835 million, \$4,496 million, and \$6,551 million, respectively, a difference of \$5,893 million.

²¹ The correct cash flow from operations values for PSEG Power for the years 2003, 2004, 2005, 2006, 2007, and 2008 are \$636 million, \$507 million, \$136 million, \$1,043 million, \$1,205 million, and \$1,686 million, respectively, as can be seen in PSEG’s 10-K forms. In addition, the APPA report incorrectly reported the cash flow from operations for all of PSEG for the years 2002 and 2003; these values should read \$1,235 million and \$1,494 million, respectively.

Excluding Capital Investment Erroneously Increases Free Cash Flows

Free cash flow is the amount of cash that a company has left over after it has paid all of its expenses, including paying for capital investments. However, in the APPA report, the free cash flows of competitive generating firms are not calculated this way. Rather, the APPA report calculates free cash flows before any capital investments. As with the report's treatment of regulated assets and write-offs, this artificially increases the estimated equity returns for competitive firms. Also, as highlighted previously, another goal of restructuring was to improve generating plant performance and reduce operating costs. Competitive generating firms in PJM have made huge capital investments to accomplish that goal, with their investors assuming all of the financial risks of those investments.

Failing to Account for Nuclear Fuel Costs Erroneously Increases Free Cash Flows

Fossil-fuel generating plants treat fuel as a variable operating cost. However, nuclear plant owners treat nuclear fuel as a capital investment cost, which is amortized over time. Typically, nuclear fuel costs include the cost of the enriched uranium plus all processing costs and spent fuel disposal costs. Since the APPA analysis wrongly excludes capital investment from free cash flows, the free cash flow estimates for competitive generating firms appear to be larger than they really are.

Including Goodwill and Excluding Write-Offs Erroneously Increases Competitive Firms' Return on Equity

"Goodwill" is an accounting term that reflects an intrinsic value of assets above the assets' book value. In essence, goodwill recognizes that a firm is worth more than the value of its assets because of the intangible benefits the firm provides. That is why firms often sell for more than their book value.

In comparing the equity returns of competitive wholesale, generators and monopoly utilities, the APPA report artificially inflates the competitive companies' returns by including goodwill in the calculations for them, but excluding it for monopoly utilities. This creates an invalid "apples-to-oranges" comparison. The reason given for this different treatment is that, "In the ratemaking process, goodwill is not included in the basis for setting rates because rates should not increase by virtue of paying more than the original cost of the investment."²² The APPA report is correct that goodwill is not included in a monopoly utility's rate base, because doing

²² APPA Report, Appendix C-7.

so would unfairly penalize ratepayers for increases in the market value of assets. However, goodwill is always shown as an intangible asset on a utility's books.²³ By including goodwill for competitive generating firms but excluding it for monopoly utilities, the APPA report artificially inflates competitive firms' equity returns.

Similarly, the APPA report inappropriately inflates equity returns for competitive generating firms by adding back all asset write-offs. The stated reason for adding back write-offs is that write-offs "would not have occurred if the companies [sic] generation segment would have continued to be regulated."²⁴ Although the statement is not strictly true—a monopoly utility found to have made an imprudent investment by its regulators may write off part of the investment—this adjustment artificially eliminates the tremendous investment risks competitive firms face. As I emphasized earlier, a crucial goal of electric restructuring was to shield utility customers from investment risk. By adding back all asset write-offs, the APPA report not only artificially inflates competitive generating firm's equity returns, it ignores this critical risk realignment.

Write-offs can occur whenever the value of an asset becomes "impaired." Impairment can occur because of a change in market conditions or a change in regulation. Write-offs are an ongoing risk that investors in all competitive firms face. That risk reduces investors' expected equity returns and, to the extent write-offs do occur, investors' realized returns. The report's author "added back" all of the asset write-offs to make the return on investment estimates comparable between competitive and monopoly companies. However, in doing so the report ignored a key investor risk: that a capital investment will fail to earn a return. By adding back all asset write-offs the report thus artificially inflates the returns of the competitive generating firms' returns.

Including Regulatory Assets Erroneously Reduces Monopoly Utilities' Return on Equity

Finally, monopoly utilities do not use the same set of accounting rules that are used by competitive firms. For example, unlike competitive firms, monopoly utilities can include "regulatory assets" on their books as equity. In essence, regulatory assets are deferred payments owed to a utility. By including those assets as part of equity, a utility's estimated return on equity will decrease relative to that of a competitive firm, which under standard accounting rules cannot include deferred payments as equity. This critical difference invalidates

²³ See, Consolidated Edison, 2008 Annual Report, p. 64, and p. 108 (Note K).

²⁴ APPA Report, Appendix C-7

direct comparisons between the equity returns of monopoly utilities and those of competitive generating firms.

5. CONCLUDING THOUGHTS

Individual consumers prefer competition. In surveys of retail consumers conducted in Texas, New England, and Maryland, nearly 80 percent of respondents in **each survey** supported consumer choice and electric competition.²⁵ The percentages of retail consumers “shopping” for their electric supplier in numerous restructured rates also show consumers want choice. In Texas well over 60% of all retail load is shopping. In each of New York, Illinois, and Western Pennsylvania almost 50% of total load shops. In Maryland, over 70% of businesses and governmental entities that have shopped for their electricity.

The reality is that competition works, and businesses and consumers want competition. If we recreate the same electric monopolies that historically shackled electric utility customers with cost overruns and poor operating performance, then electric consumers will lose, not gain. That’s not what America needs, especially now.

²⁵ January 2009, New England Energy Alliance, 2009 New England Consumer Energy Survey by Opinion Dynamics Corporation. Available at: <http://www.newenglandenergyalliance.org/downloads/NEEAcharts2009ConsumerSurvey.pdf>; “Texas Voter Survey Key Findings,” Baselice & Associates, Inc.; December 2007, “Maryland Survey Results Show Strong Support For Electricity Competition In Maryland,” Retail Energy Supply Association (RESA).