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October 12, 2007

Ms. Renee Jenkins Secretary Public Utilities Commission of Ohio 180 East Broad Street, 13th Floor Columbus, OH 43215-3793

Re: Case No. 07-796-EL-ATA, et al.

Dear Ms. Jenkins:

Please find enclosed the Reply Comments of Constellation NewEnergy, Inc. and Constellation Energy Commodities Group, Inc.

Sincerely yours,

//s//

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BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of the Ohio) Edison Company, the Cleveland Electric) Illuminating Company, and the Toledo) Edison Company for Approval of a) Competitive Bidding Process for Standard) Service Offer Electric Generation Supply,) Accounting Modifications Associated with) Reconciliation Mechanism and Phase In,) and Tariffs for Generation Service.)

Case No. 07-796-EL-ATA Case No. 07-797-EL-ATA

REPLY COMMENTS OF

CONSTELLATION NEWENERGY, INC.

AND

CONSTELLATION ENERGY COMMODITIES GROUP, INC.

October 12, 2007

Now comes Constellation NewEnergy, Inc. and Constellation Energy Commodities Group (collectively, "Constellation"), intervenors in the above-styled proceeding who submitted initial comments, and now provide the following reply comments regarding the proposed Competitive Bid Process ("CBP") of the FirstEnergy Companies ("First Energy" or "FE").

Certain parties have alleged that First Energy's proposal to procure electric power and energy for its retail customers beginning on January 1, 2009 through a competitive bidding process should be rejected, based in large measure on such parties' claims that competition does not exist in the wholesale electric market, and that competition has not developed in the Ohio retail market as expected. These parties rely on rhetoric to derail the proposed competitive bidding process. Notably, they fail to cite any recognized authority for their assertions. Moreover, the comments reflect a lack of understanding of how competitive markets work, and instead rely on unsupported assertions. If such views are accepted, development of the Ohio electric energy market will end, to be replaced by a regulatory structure that has failed repeatedly over time. The result will be higher electric costs, less innovation, and decreased system reliability, all of which will harm Ohio consumers.

In fact, a wealth of studies and reports by recognized industry experts demonstrate that a vibrant competitive wholesale market currently exists. Robust competition is the best mechanism to ensure low prices for electricity users, pursue important policy goals and meet the energy challenges of the future. Competition creates appropriate price signals for investment both in new generation and demand response capacity, as well as improved overall energy efficiency. Competition also promotes more efficient and lower cost operation of existing generating resources, improved electric consumption decisions by end users, and development of alternative resources, including renewable resources.

The attached analysis from industry experts Dr. Jonathan Lesser and Mr. Collin Cain, of Bates White economic consultants, addresses the fallacies relied on by Staff and other opponents of the proposed auction, and highlights the realities of the competitive environment as related to First Energy's proposed competitive bidding process. For the reasons advanced in its Initial Comments and those described in the attached analysis, Constellation strongly supports the Competitive Bidding Process proposed by First Energy and urges the Commission to approve the proposal.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and accurate copy of the foregoing document was served this 12th day of October, 2007 by regular U.S. mail, postage prepaid, or by electronic mail, upon the persons listed below.

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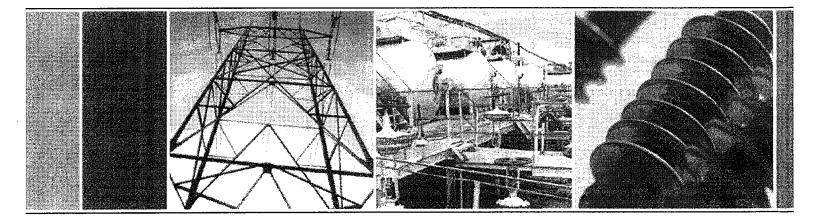
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Reply to Comments on the FirstEnergy Companies' Proposed Competitive Bid Process

Jonathan A. Lesser, Ph.D. Collin Cain, M.Sc. Bates White, LLC

October 12, 2007

Table of Contents

-

Exec	utive	Summary EX-	1				
1.	Retail Markets 1						
11.	. Wholesale Markets						
111.	The Structure of Spot Markets and Single Clearing Price Auctions 6						
	А.	The Myth of Variable Cost Prices	6				
	В.	The Myth of "Excess" Profits	8				
IV.	Price Formation, Operating Efficiency and Investment						
	А.	Single Price Auctions1	2				
	В.	Improved operating efficiency of competitive generation	3				
	C.	Lack of investment in new baseload generation	5				
	D.	The Balancing Market1	7				
V.	Restructuring and "Reasonable" Price Levels						
	А.	Assessing the Impact of Restructuring1	9				
	В.	"Reasonable" Price Levels 2	1				
VI.	Ability to Support Large Scale Procurements						
	А.	Repetitive procurement processes do not mean gaming	5				
	В.	The Role of Demand Response2	9				
	C.	Market Liquidity3	1				
	D.	Evidence from Ancillary Services Market Analysis	1				
	E.	Market Monitoring	4				
	F.	Joint and Common Market	5				
VII.	Conclusions						

Reply to Comments on the FirstEnergy Companies' Proposed Competitive Bid Process

Jonathan A. Lesser, Ph.D. Collin Cain, M.Sc. Bates White, LLC¹

The authors submit these comments to the Public Utilities Commission of Ohio ("PUCO" or "the Commission") in Case Nos. 07-796-EL-ATA and 07-797-EL-ATA. In large part, these comments respond directly to the Initial Comments submitted by the PUCO Staff ("Staff"), dated September 21, 2007, regarding the proposed Competitive Bid Process ("CBP") of the FirstEnergy Companies. However, these comments apply equally to those parties who, like Staff, argue against the proposed competitive bidding process based on faulty perceptions regarding the development of the competitive retail and/or wholesale markets, or who expressed concern regarding the rates that may result from the proposed auction.²

We believe that robust competitive markets for electric power and energy are essential to ensure low prices for consumers, pursue important policy goals

¹ Bates White, LLC was asked by Constellation NewEnergy, Inc. and Constellation Energy Commodities Group, Inc. to review the comments submitted by Commission Staff in the referenced dockets and to reply to Staff assertions regarding the proposed Competitive Bid Process of the FirstEnergy Companies.

² These parties include the Ohio Energy Group and the NE Ohio Public Energy Council. Ohio Partners for Affordable Energy made similar claims, but filed their comments past the PUCO deadline, and should therefore be rejected.

and meet the energy challenges of the future. Competition creates appropriate price signals for investment, both in new generation and demand response vehicles, as well as improved overall energy efficiency. Competition also promotes more efficient and lower cost operation of existing generating resources, improved electric consumption decisions by end users, and development of alternative resources, including renewable resources.

We are concerned that the comments filed by the PUCO Staff reflect a lack of understanding of how competitive markets work, making unsubstantiated and erroneous assertions. If Staff's views are accepted, electric energy market development will end, to be replaced by a command and control regulatory structure that has repeatedly failed over time. The result will be higher electric costs, less innovation, and decreased system reliability, all of which will harm Ohio consumers.

Executive Summary

The comments submitted by Staff do not address FirstEnergy's proposed CPB *per se.* Rather, Staff's comments consist almost entirely of unsupported, misleading, and economically false assertions. In questioning just about every aspect of wholesale and retail electric markets, PUCO Staff fail to grasp that the "problems" they have discovered are a direct result of regulatory policies they themselves favored, such as mandatory retail price caps. We urge the Commission to give careful consideration to the evidence:

- Retail Markets Staff considers retail markets to be undeveloped. In fact, there is a surprising amount of customer switching in the FirstEnergy territories, especially considering that retail competition in Ohio was stifled by the imposition of administratively determined rates, restrictive switching rules, capped shopping credits, and deferred cost recovery by Ohio electric distribution companies.
- Wholesale Markets Staff asserts that wholesale prices are "unreasonable," without ever defining what "reasonable" prices would be. Not only is there is ample evidence that wholesale markets are highly competitive, but the recent increases in wholesale prices are the direct result of higher fuel costs. However well-intentioned government intervention may be, such as below-market price caps, prices will always reflect supply and demand conditions
- Restructuring Staff references a newspaper article, which provides a rate comparison to "prove" that restructured states have higher prices than unrestructured ones. The comparison in this article, and others like it, are severely flawed, because they fail to account for the main drivers of electricity costs. Other studies that control properly for these factors produce the opposite conclusion – that electricity consumers have benefited substantially from restructuring.
- Large Scale Procurements Staff claims that wholesale markets are insufficiently competitive to support large scale procurements of default service supply. However, the independent market monitors for the centralized markets and those who monitor default service

procurements in other states have concluded that wholesale markets and competitive procurements are highly competitive.

- "Excess" Profits Staff complains that some restructured companies currently profit from fully-depreciated baseload generation, and thus earn "excess" profits. This is both irrelevant and wrong. In any competitive market, low-cost producers earn greater profits than those with higher costs. Without profits, there can be no new investment to ensure adequate supplies of electricity and system reliability, as well as efficiency improvements and innovation.
- The Spot Market Staff claims that restructuring was "sold" on the promise that prices would be driven toward the utilities' variable cost of production. Again, this is false. No electric generator (nor any other sort of producer) can stay in business if it is paid only the variable cost of its output, because producers must also cover their fixed costs.

Ultimately, Staff would "turn back the clock," returning Ohio to a pre-

restructuring world in which captive ratepayers bore all financial risks, rather than investors. Staff would abandon the proven price discipline of the marketplace in favor of heavy-handed regulation, the results of which led to significant cost overruns in the past and contributed to the push for restructuring in the first place. Wholesale electric markets work, and are working well in PJM and MISO. As such, First Energy's proposed competitive procurement will enlist market forces for the benefit of retail customers, and not to their detriment.

I. Retail Markets

Staff begins its circular and misleading assertions against competitive procurement of default service supply with the observation that a "vibrant retail market has not developed"³ in Ohio. It is striking, and disconcerting, that Staff apparently views the lack of a vibrant retail market for electricity to be the foundation of its opposition to FirstEnergy's CBP. Competitive Retail Electric Service (CRES) providers were quite active in Ohio, and particularly in the FirstEnergy service territories, until mandatory Rate Stabilization Plans (RSPs) were put into effect with the enthusiastic support of Staff.

The economic impact of imposing the RSPs was entirely predictable: mandating standard offer service rates for electric customers at below-market prices ensured that CRES providers could not possibly compete and would disappear over time. There was no "level playing field." Moreover, these impacts were accurately predicted by a number of intervening parties over three years ago in the FirstEnergy Companies' RSP case.⁴ The results are illustrated in the figures presented in the Staff comments showing the sharp decreases in retail service MWhs that began in September 2005

Retail competition in Ohio was stifled by the imposition of administratively determined rates, restrictive switching rules, capped shopping credits, and

³ Staff Comments, at 2.

⁴ See, e.g., Reply Brief of MidAmerican Energy Company, Strategic Energy LLC, Constellation NewEnergy, Inc., National Energy Marketers Association, and Constellation Power Source, Inc. (March 31, 2004), Case No. 03-2144-EL-ATA, EL-AAM, EL-UNC.

deferred cost recovery by Ohio electric distribution companies (EDUs). It is therefore disingenuous in the extreme for Staff to argue that the resulting lack of retail activity proves that competitive conditions do not exist. There is limited retail competition precisely because of the Staff-recommended structure imposed in Ohio. In fact, Staff's own presentation shows that retail competition will be vigorous with a level playing field, one that is not tilted steeply toward the incumbent utility. As the Staff comments note, retail switching was over 20 percent in 2005. (Staff Comments, page 2)

Staff is not willing even to acknowledge the retail competition that is still evident in the FirstEnergy territories. Table 1 shows the percentage share of retail sales provided by Competitive Retail Electric Service providers in the combined FirstEnergy territories and the combined territories of the other Ohio EDUs. Clearly, significant competitive retail activity in the FirstEnergy territories continues, though in aggregate it has fallen approximately by half from its peak.

	Residential	Commercial	Industrial	Total Sales
FirstEnergy Territories	13.7%	24.8%	10.6%	15.3%
Other Ohio EDUs	0.3%	4.6%	8.1%	5.0%

 Table 1: CRES Share of Total Retail Sales (month ending June 30, 2007)

Source: PUCO, Division of Market Monitoring & Assessment.

As Table 1 shows, there are many customers who have exercised their ability to choose competitive suppliers, including residential customers, despite a highly restrictive retail market environment. This is remarkable, given the

competitive restrictions imposed in Ohio. Staff also implies that the level of competitive retail activity in the FirstEnergy territories is somehow "illegitimate" because a large proportion of the CRES supply is provided by FirstEnergy's competitive affiliate, FirstEnergy Solutions. FirstEnergy Solutions is a competitive provider, and consumers have exercised their right to choose a provider other than their local utility. Considering the extent to which CRES providers have been handicapped by existing restrictions on the market, there is no reason to discount the ability of consumers to get a better deal from any supplier if true market competition is allowed.

II. Wholesale Markets

Staff also criticizes wholesale electricity markets using misleading and unsupported arguments. Restructuring and the development and extension of centralized markets such as those in PJM and MISO were never intended to guarantee lower rates forever, just as any other competitive market cannot guarantee "always lower prices." In Ohio, wholesale electric costs today reflect the large increases in fossil fuel prices, which are determined by global supply and demand conditions. For example, between 1999 and 2006, the price of natural gas increased by over 300 percent, and the price of Appalachian coal increased by about 70 percent. Additionally, there have been significant price increases for infrastructure components, such as copper, cement, steam turbines, and so forth. Staff remains silent as to how, by returning to the failed

regulatory model of the past, that retail customers would be shielded from these global price increases.

The goal of wholesale electric competition, whose introduction predates restructuring by many years, and competitive electric markets in general, was that the benefits will accrue <u>over the long run</u> relative to regulated rates.⁵ Under traditional cost-of-service ("COS") regulation, rates remain fixed for an indeterminate time and are then adjusted when a utility files a rate case. Assuming the utility's costs are found to be both prudent, and known and measurable, the rates are adjusted accordingly. However, it is well known that COS regulation introduces regulatory lag. The longer the period between rate adjustments, the greater the regulatory lag and the greater the disconnection between regulated and market prices. This can be true even for utilities with fuel cost or power cost adjustment clauses, which typically provide periodic adjustments.

For example, when Ohio's electric industry restructuring law was passed in 1999, no one predicted that natural gas prices would reach the unprecedented levels experienced in late 2005 and early 2006. Nor did anyone predict that the delivered cost for uranium would increase more than 800% by March 2007, including a doubling of prices in one year. It is also important to note that arguments for restructuring have never been predicated on an assumption of

⁵ Wholesale electric competition began in 1978, under the Public Utilities Regulatory Policy Act of 1978 (PURPA).

sustained low fossil fuel and uranium prices. Rather, economists have long argued that competitive restructuring would create stronger incentives for appropriate investment, efficiency, and cost controls than traditional COS rate regulation, and that this, in turn, would result in lower costs for consumers in the long term. Over the long-run, competitive pressures will result in lower rates, because competition enhances the efficiency of generation production and development. Indeed, any competitive market is subject to price spikes, and it is those spikes that motivate increases in supply, lowering prices, and thereby providing a self-correcting price mechanism over time.

To judge wholesale competition a "success" only if the resulting wholesale market prices are below embedded costs at <u>all</u> times is unreasonable, unfair, and myopic. Moreover, it is an economic impossibility. All prices cannot be below the average market price because the market price reflects the underlying costs.⁶ Such a standard for determining success is equivalent to applying a so-called "economic" used and useful test, which some regulators and consumer advocates sought to apply to deny full cost-recovery to utilities for the costs of owned generating plants or purchased-power contracts that were above market at a given time, even if the utility's decisions were prudent and the assets were

⁶ This is sometimes called the "Lake Wobegon" effect, where "all children are above average."

providing energy.⁷ This is not only hindsight regulation, it is "heads I win, tails you lose" regulation that harms consumers in the long run.

III. The Structure of Spot Markets and Single Clearing Price Auctions

A. The Myth of Variable Cost Prices

Without any citation or support, Staff asserts that, "[e]lectric restructuring was sold on the basis that competition would drive prices toward the utilities' variable cost of production." (Staff Comments, Page 9). This assertion is patently false. Competition in generation, combined with centralized markets, will tend to induce supply price offers equal to or very near the variable cost of each resource, and will produce a market clearing price for a given period at the variable cost of the marginal generating unit.

This is no different than how competition works in all other markets, whether for tires or tin. The interaction of supply and demand determines a single price for the commodity, which will equal the variable cost of production of the marginal producer, i.e. the highest-cost producer needed to meet demand. In general, producers will not face identical costs, and low-cost producers will be more profitable than high-cost producers. When demand increases and prices rise, new suppliers will be encouraged to enter the market, returning the market

⁷ For a discussion and examples, see J. Lesser, "The Used and Useful Test: Implications for a Restructured Electric Industry," <u>Energy Law Journal</u> 23, No.2, (2002), at 349-381.

to equilibrium. High-cost producers are forced to innovate and reduce their costs, or face bankruptcy. For example, Ohio's steel industry no longer consists of inefficient blast furnaces. Instead, the industry continues to play a significant role in Ohio's economy because producers have switched to electric-arc furnaces, which are far more efficient, thus lowering production costs.

The same supply and demand logic applies in centralized electricity markets. In a centralized market, the system operator takes offer bids from all supply resources, and uses the offers to dispatch resources in an economically optimal way to meet load, deploying low-cost resources first, followed by increasingly more expensive resources, as needed.⁸ Generators are paid the clearing price when they operate, which will be above the variable operating cost unless a generator is setting the price as the marginal resource. This fact seems to concern many observers. However, as noted, this type of pricing behavior is the same as pricing in all other commodity markets, where price is determined by supply and demand, and the operating cost of the highest-cost producer needed to meet demand.

Moreover, the cost characteristics of electric generating plants make it clear why it is important and necessary that generators are paid a single clearing price. "Baseload" generators, such as nuclear and coal-fired plants, have low variable operating costs, but high fixed costs, which stem from the large capital

⁸ The system operator also must account for available transmission capacity and effects on system stability when determining optimal dispatch.

investments necessary to build these plants. Since their variable operating costs are low, these plants operate virtually non-stop, except for required maintenance or forced outages. "Peaking" generators, on the other hand, are much cheaper to build, but have much higher variable operating costs. As a result, peakers are used as needed to meet peak demand, when the value of electricity is at its highest. There are also "intermediate" resources, whose capital costs and variable cost fall between those of baseload and peaking units.

No electric generator (nor any other sort of producer) can stay in business if it is paid only the variable cost of its output, because they must also recover their fixed costs. Essentially, this is equivalent to receiving a high enough price to "pay the mortgage." For example, if Ohio steel producers could not recover the extensive capital investments in their plants through the market price of steel, they would shut down. Likewise, without sufficient revenue to reimburse a generator's substantial fixed costs, the generator will be forced to shut down. There would be no investment in new generation capacity if developers expected to recover only their variable costs, because investors would not be willing to finance such investments. Whether under a competitive model or under old-style cost-of-service regulation, it is unsustainable to pay for electricity only at the variable cost of production.

B. The Myth of "Excess" Profits

Staff also refers to the "extra profits for owners of baseload facilities that have been significantly or fully depreciated under rate of return regulation,

transition plans, and rate stabilization and rate certainty plans" (Staff Comments, Page 10). This is simply another canard that has been raised by restructuring opponents. It raises the specter that generating plant owners are earning profits on plants that have effectively been paid for by ratepayers, rather like a homeowner who has paid off his mortgage being tossed out, and then forced to rent his home back.

First, the various elements of restructuring and transition plans were not imposed by the utilities on unwitting consumers and regulators; they were established through negotiated and closely-scrutinized settlement and regulatory proceedings. Indeed, the undepreciated value of generating plants that were transferred from regulated to competitive ownership was a foundation of detailed "stranded cost" proceedings.

Second, many baseload plants, especially nuclear plants, were transferred to unregulated owners when their market values were low. Because natural gas prices at the time were forecast to remain low and the operating records of many of those nuclear plants were dismal – some having endured multiyear outages that forced ratepayers to bear the costs of replacement power and extensive repairs – many nuclear plants were considered unprofitable. For example, a January 15, 1999, report prepared by Synapse Energy Economics for the Citizens Action Coalition addressed the economic value of nuclear plants.⁹ The

⁹ Synapse Energy Economics, "Stranded Nuclear Waste: Implications of Electric Industry Deregulation for Nuclear Plant Retirements and Funding Decommissioning and Spent Fuel," January 15, 1999 ("Synapse 1999 Report"). Available at: http://www.citact.org/nucrep.html.

report cited a number of studies concluding that a significant fraction of 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 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" (page 12).

The Synapse Report also presented its own analysis of nuclear plants at risk of shutdown. The authors of that report 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. The authors stated,

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.

Regulated utilities were, as a result, compensated for the stranded costs of their generating assets, i.e., for the difference between the book value and market value of those assets. Yes, the plants had been built to serve customer loads, but competition shifted the financial responsibility for the plants from captive retail customers to investors. This reallocation of generating plant financial risks from was a primary goal of electric restructuring. Restructuring shifted the financial risks of cost overruns, extended outages, and for many nuclear plants, higher than expected decommissioning costs, from captive ratepayers to investors. A return to rate regulation would force ratepayers to once again bear all of those risks, which ironically had led to higher regulated rates and calls for restructuring in the first place. The subsequent and unexpected steep rise in energy prices caused the value of baseload plants, especially nuclear plants, to increase. Thus, reality turned out differently than what was forecast. Yet, to fault restructuring and wholesale competition for this is to confuse decisions with outcomes.

Finally, suppose all formerly utility-owned baseload generating plants were sold to third parties today. Those plants would command high prices because of their increased value. As a result, the new owners' (whether regulated utilities or other competitive owners) required revenues would have to be far above the variable operating cost to justify the purchase prices, just as they would if a new baseload plant was built by a regulated utility and placed into ratebase.

IV. Price Formation, Operating Efficiency and Investment

A. Single Price Auctions

Various evaluations of price formation in the centralized markets have demonstrated that bidding behavior and resulting market prices are highly competitive in the vast majority of hours.¹⁰ The single-price auction format provides incentives for generators to bid close to the short-run marginal cost of each power plant, which facilitates efficient dispatch and results in market clearing prices that help provide appropriate signals for plant operation, new investment in generation and transmission, and consumption by end users.

Bidders have a strong incentive to bid at or near their operating cost because the potential loss from not being selected to operate can be very large, particularly in peak hours. Nuclear units will sometimes submit an offer price of zero, so they will be assured of being called on to run. The difficulty and cost of shutting down a reactor and restarting it warrants such a strategy. Most other generators are comfortably inframarginal – i.e., they are not likely to be needed on the margin to meet load. Since the clearing price is likely to be set by another higher-cost resource, there is no incentive for inframarginal units to bid above

¹⁰ See, for instance, PJM's <u>2006 State of the Market Report</u>, which states that, "overall results support the conclusion that prices in PJM are set, on average, by marginal units operating at or very close to their marginal costs. This is strong evidence of competitive behavior." (PJM Market Monitoring Unit, "2006 State of the Market Report, Vol. II", March, 2007, Page 2-31). It is further reported that, "for 5,351 hours, or 61 percent, the markup component of LMP was \$0.00 or lower." (PJM SOM, Vol. II, Page 2-60).

their variable cost. For higher-cost resources, the presence of competitive supply with unknown costs increases uncertainty about the probability of being selected, and maintains the incentive to bid at cost. In circumstances where supply is constrained, and a generator may have some ability to exert market power by bidding above cost, the potential penalty for being identified by the market monitor as attempting to manipulate the market is usually sufficient to discipline bidding behavior. Finally, in extreme situations, the system operator can impose offer caps or other administrative pricing mechanisms.

B. Improved operating efficiency of competitive generation

Competitive ownership of generation also creates a strong incentive to improve operating efficiency and minimize costs. Several empirical studies have demonstrated that operating efficiencies of competitively-owned fossil-fuel plants has improved relative to efficiencies at still-regulated plants. For example, a 2006 study by Profs. Kira Fabrizio, Nancy Rose, and Catherine Wolfram, concluded that investor-owned utility plants in states that restructured their wholesale electricity markets experienced the largest reductions in non-fuel operating expenses and labor costs relative to their undivested counterparts. 11 Previously, in a 2005 study, Profs. James Bushnell and Catherine Wolfram

¹¹ Fabrizio, K, N. Rose, and C. Wolfram, "Does Competition Reduce Costs? Assessing the Impact of Regulatory Restructuring on U.S. Electric Generation Efficiency," Massachusetts Institute of Technology, Center for Energy and Environmental Policy Research, UC Energy Institute, CSEM Working Paper 135, NBER Working Paper 11001, ("Fabrizio, et al."). Available at: <u>http://faculty.haas.berkeley.edu/wolfram/Papers/frw.041306.pdf</u>.

determined that operating efficiencies at divested power plants increased by two percent relative to non-divested plants because of market incentives.¹²

Investment in new generation capacity will occur when the expected price of energy (and capacity, and ancillary services, where applicable) allows for recovery of the initial investment plus a return. Staff observes that there has been "a lack of investment in baseload capacity in Ohio and elsewhere" (Staff Comments, Page 10). This is consistent with reporting by the Independent Market Monitor for the Midwest Independent System Operator (MISO). In the 2006 State of the Market Report, the market monitor states that "net revenues are not currently sufficient to support new entry...",¹³ attributing the shortfall in part to the fact that MISO did not have (and still does not have) markets for either ancillary services or capacity in 2006.^{14,15}

Thus, despite Staff's contention that wholesale markets have failed "to discipline prices to reasonable levels" (Staff Comments, Page 6), energy market

¹² Bushnell, J., and C. Wolfram, "Ownership Change, Incentives and Plant Efficiency: The Divestiture of U.S. Electric Generation Plants," California Energy Institute, Center for the Study of Energy Markets, CSEM-WP-140, March 2005 ("Bushnell and Wolfram"). Available at: http://www.ucei.berkeley.edu.

¹³ Independent Market Monitor for the Midwest ISO, <u>2006 State of the Market Report, the Midwest ISO</u>. (July 2007) ("SOM Report"), Page iv.

¹⁴ MISO filed plans with the Federal Energy Regulatory Commission (FERC) in February 2007 to implement ancillary services markets for Regulating Reserves and Contingency Reserves.

¹⁵ The detailed assessment of energy market net revenue adequacy in the PJM <u>2006 State of the Market Report</u> indicates that net revenue has been below the 20-year levelized cost of new capacity for combustion turbine, combined cycle generators for the years 2000 through 2006. In 2005, PJM energy market prices would have provided 110% of the net revenue requirement for a new pulverized coal plant (CP). In the remaining years between 2000 and 2006, net revenue adequacy for a CP averaged 66%, i.e. energy market revenue was insufficient to support new investment.

prices have in fact been insufficient to support new investment. If the market prices Staff considers "unreasonable" cannot support needed investment in new generation capacity so as to sustain required reliability of the electrical system, it is not clear what Staff means by "reasonable levels."

C. Lack of investment in new baseload generation.

Staff also claims (page 10) that there is a disincentive for owners of existing baseload generation capacity to invest in new plants and that this represents a "market failure." First, it should be recalled that since the enactment of SB3 and restructuring in Ohio, approximately 8,000 MW of new generation has been constructed in Ohio. While there may now be a disincentive to invest in new baseload capacity, the disincentive has nothing to do with "market failure" and everything to do with regulatory uncertainty. Given the likelihood of regulations to reduce carbon dioxide emissions, the financial risks of building and operating new baseload coal plants are increasing. The Governor, in his "Energy and Jobs for Ohio," has proposed that a minimum of 12.5% of generation in Ohio be produced by renewable resources, and an additional 12.5% be produced by other advanced generating resources. Given this requirement, along with "carbon planning" requirements, neither existing nor potential new generation suppliers are likely to build new baseload coal plants in Ohio. Similar rules apply in many areas of the country, with politicians increasing the regulatory and financial hurdles to build new baseload coal plants. Moreover,

local siting rules and more stringent air pollution regulations have steadily increased the cost of building new coal plants.

The other form of baseload generation is nuclear power. In fact, a number of companies <u>are</u> planning to build new plants and several, including Entergy – Grand Gulf and Exelon – have received Early Siting Permits from the Nuclear Regulatory Commission (NRC).¹⁶ Moreover, 12 companies will be submitting construction and operating permit applications to the NRC in fiscal year 2008.¹⁷ As Staff should be aware, the reason no new nuclear plants were proposed in the recent past stems from the significant financial and regulatory hurdles, as well as public opposition to nuclear plants. No new nuclear plants were ordered after the 1977 accident at Three Mile Island. That was almost 20 years prior to electric industry restructuring. To assert that the lack of new nuclear plants is the result of restructuring and wholesale competition is untrue.

Finally, Staff's assertion that existing baseload generators will not build new baseload plants because doing so would lower market clearing prices falsely assumes that existing baseload plant owners are colluding to influence market prices. However, the market monitor has determined that the wholesale market is competitive. Thus, basic economic principles mean that each plant owner takes market prices as given. As a result, those plant owners will have an incentive to build new baseload capacity as long as the expected returns from

¹⁶ Source: Nuclear Energy Institute, September 2007. Available at: <u>http://www.nei.org/filefolder/new_nuclear_plant_status_2.xls</u>.

¹⁷ Ibid.

doing so will justify the investment. The reasons they have not stem from the regulatory risks of doing so. Of note, no party has provided any evidence whatsoever of collusive behavior in the wholesale market.

D. The Balancing Market

Staff's discussion of the role of the real time market, which they refer to as the "balancing market," is fraught with errors and displays a lack of understanding of the role of price discovery. Staff's argument appears to be that, (1) wholesale prices in the "balancing" market are determined using a single price auction; (2) real-time market prices determine bilateral contract prices; (3) single auction prices result in higher market prices than under a pay-as-bid auction; and, therefore, bilateral contract prices are too high. Furthermore, Staff asserts, based on allegations of trading abuses by a natural gas company (Amaranth), that wholesale electric markets are not "fair or efficient" (page 11).

First, the allegations against Amaranth – we are not aware that these allegations have been proven – have no bearing on the competitiveness of the wholesale market. If natural gas prices have been raised artificially, then the costs of electric generation will be affected regardless of the underlying electric industry structure. Staff might as well argue that the price of steel is not "fair or efficient," since steel manufacturing also uses natural gas.

If real time market prices were based on a "pay-as-bid" auction, then market clearing prices would be the same, or perhaps even higher, than under the single price auction. Under a pay-as-bid auction, suppliers will bid the price

they expect to be the market clearing price. They will not bid their variable production cost, as Staff seems to believe. Moreover, because a pay-as-bid auction introduces more uncertainty for bidders, those bidders are likely to compensate by increasing their bids slightly to account for the greater financial risk.

Second, Staff also raises a concern that a small fraction of transactions (in the real-time market) is influencing market prices. Since real-time market prices are competitive, as determined by the market monitor, this concern is misplaced. Suppose, for example, that there were no day-ahead or real-time markets at all. In that case, market prices would reflect an aggregation of bilateral transactions. Would the average bilateral price be lower as a result? Of course not. All bilateral transactions are based on buyers' and sellers' expectations over the future. Those expectations will be based on market fundamentals: fuel prices, expected growth in demand, estimates of new supplies, and so forth. Given the inherent uncertainty of such estimates, the lack of day-ahead and real-time markets would, if anything, tend to increase bilateral transaction prices, not decrease them as Staff alleges. Day-ahead and real-time market prices provide additional information for both buyers and sellers, reducing uncertainty. Reduced uncertainty means lower costs and, hence, lower prices.

V. Restructuring and "Reasonable" Price Levels

A. Assessing the Impact of Restructuring

Staff attempts to bolster its critique of wholesale power markets by appealing to an article in USA Today, which claims that electric rates have risen faster in states that pursued electric industry restructuring compared to states that did not.¹⁸ The precise methodology used by the Associated Press in conducting the analysis is not available for review, but any analysis that simply compares state retail electricity rates deeply flawed, for many reasons. Principle among these are the following:

- The analyses do not control for regional differences in generation costs. For instance, states or regions that depend largely on oil and natural gas (e.g. in the restructured states of the Northeast and California), have greater exposure to the steep rise in fuel prices than states or regions with a greater preponderance of coal, nuclear, and hydro generation (including many unrestructured states, especially those in the South). Other factors, such as environmental costs, zoning hurdles and overall regional costs also tend to have a proportionally greater effect in the densely populated areas of the Northeast and California.
- The appropriate classification of the states is not clear. For instance, California was restructured, with notorious results caused by a flawed restructuring plan and poor market design. Most power plants are still competitively owned and operated, but retail rates do not reflect current market prices.
- Retail price caps that remain in effect in some restructured states can skew rate comparisons.

¹⁸ "Electric Deregulation Fails to Live Up to Promises as Bills Soar", USA Today, April 21, 2007.

 As already noted, the impact of underlying cost increases tends to be lagged under cost of service regulatory treatment in unrestructured states.

More rigorous studies that have controlled for some of these factors have come to quite different conclusions than the type mentioned above. For instance, a recently published study (<u>Public Utilities Fortnightly</u>, "Restructuring Revisited," by J.P. Pfeifenberger, G.N. Basheda, and A.C. Schumacher, June 2007) performed a comparative analysis of "restructured" and "unrestructured" states. The authors concluded that there was no significant difference in rate changes during 1997-2006 between restructured and non-restructured states (rates increased by approximately 31% in both groups of states). Furthermore, those authors concluded that the rate increases in the restructured states "lagged" the rate increases in the unrestructured states, resulting in a <u>\$24 billion</u> benefit to customers in restructured states through 2006.¹⁹

Staff also makes highly misleading references to dramatic price increases in restructured states with recent competitive procurements. In both Maryland and Illinois, retail rate increases that were projected for residential customers based on the results of recent default service supply procurements reflected a move from administratively capped, below-market rates, to rates reflecting current supply costs. The 72% rate increase that Staff cites for Maryland refers to the projected impact of the 2005/2006 RFP for supplying BG&E residential default service. The negotiated settlement that restructured BG&E established a

¹⁹ See also, "(Public Utilities Fortnightly, "The Fallacy of High Prices," by Harold Axelrod, David DeRamus, and Collin Cain, November 2006).

residential rate reduction of 6.5% relative to regulated rates that had been in effect since 1993. That reduced rate was capped, and was in effect for more than 6 years, through mid-2006. Between the time that residential rates were reduced and capped to the time of the RFP to procure default service supply competitively, natural gas prices had more than tripled, Appalachian coal prices had risen by roughly 60%, and uranium prices had more than doubled.²⁰ When the BG&E procurement began in last quarter of 2005, natural gas prices had spiked to more than 5 times 1999 levels following the disruptions from Hurricanes Katrina and Rita.

Staff's references to retail price increases following the expiration of rate caps is testimony to the benefits customers enjoyed from below-cost prices established administratively rather than an indictment of restructuring. Such rates were untenable either under competitive procurement or under traditional cost of service regulation.

B. "Reasonable" Price Levels

Staff asserts that, "The failure of retail markets in Ohio reflects the failure of wholesale markets to discipline prices to reasonable levels" (Staff Comments, Page 6). This statement is vague and meaningless. Staff provides no benchmark for gauging the "reasonableness" of market prices. As discussed previously, according to the Independent Market Monitor, MISO wholesale

²⁰ Average commodity price levels for 2005 compared to 1999.

energy markets are competitive.²¹ By definition, a competitive market is one in which prices are disciplined by market forces, such as new entry. Staff's assertion implies that "reasonable" prices must always below the prices that would prevail in a competitive market. This is clearly impossible. Moreover, Staff's position contradicts the foundation of economic regulation, which is to mimic the outcome of competitive markets.²² The prices of steel, rubber, wheat, and every other commodity are all set by market forces. Would Staff also conclude that the prices of all of these commodities to be unreasonable? If so, what would "reasonable" prices be?

The only possible meaning of Staff's assertion is that competitive wholesale market prices are higher than the prices that would prevail under fully regulated rates. Staff presents no evidence or analysis to support such a conclusion. The only ways for regulated generation prices to be lower than competitive prices would be if average generating costs were lower under rate regulation than under competition or if prices were artificially capped below market levels. Given the studies cited previously showing that competitive generation plants have increased their efficiency and output relative to stillregulated generation, this conclusion does not follow. In fact, precisely the opposite conclusion must result.

²¹ In the 2006 State of the Market Report, the MISO IMM concluded: "Overall we found that the market performed competitively in 2006." 2006 MISO SOM, Page i.

²² See, e.g., C. Philips, <u>The Regulation of Public Utilities</u> (Vienna, VA: Public Utilities Reports, Inc. 1994), Chapters 2-3.

Capping generation prices, while providing short-run "benefits" to ratepayers, exacts a far higher long-term cost. Like any artificial price cap, the result is a lack of new investment; potential suppliers will not enter the market if they cannot earn a just and reasonable return equivalent to investments having comparable risks. The latter is a fundamental tenet of rate regulation.²³ Moreover, when artificial price caps are removed, as they must eventually be, consumers can face significant economic disruptions from rates suddenly equilibrating to market levels, much as a dam bursting.

VI. Ability to Support Large Scale Procurements

Staff questions the ability of wholesale markets to support large scale default service procurements, and attempts to validate this concern by reference to the fact that regulators in New Jersey and Maryland have requested an analysis of such procurements by the PJM Market Monitor (Page 8). Yet again, Staff offers no evidence that the procurements to date have produced anything but competitive prices. In fact, available evidence from the auction monitors employed by the state regulators in New Jersey, Maryland and Illinois indicate

²³ <u>See</u>, FOER 2007, pp.108-111.

that the auction results have indeed been competitive and have reflected underlying supply costs and risks.²⁴

It is not at all clear that the Market Monitor for the PJM centralized markets has the obligation or necessary resources to conduct an analysis of state level procurements, which are fundamentally bilateral contracts. Regardless, Staff's comments imply that the request by the state regulators for an analysis is evidence in itself that the markets cannot support large scale procurements. It would be hoped that Staff would wait for the results of the Market Monitor's analysis before assuming its conclusions. Of course, Staff has attempted to insulate itself from any necessity to acknowledge actual conclusions by also questioning the independence of the Market Monitor.

Staff states its belief that the PUC should direct FirstEnergy "to demonstrate that the wholesale market on which it will rely for electricity is sufficiently competitive to ensure that prices from the auction with be just and reasonable." (Page 9) Given the body of evidence that centralized wholesale markets in MISO and PJM *are* competitive, the onus should rather be on those opposing competitive procurement to demonstrate that the wholesale markets are *not* sufficiently competitive.

²⁴ Illinois Auction, see: "The September 2006 Illinois Auction Post-Auction Public Report of the Staff." Prepared by the Staff of the Illinois Commerce Commission with the assistance of Boston Pacific Company, Inc. (December 6, 2006). BGS Auction, see: "Annual Final Report On The 2007 BGS FP And CIEP Auctions And The RECO Swap RFP." Prepared by Boston Pacific Company, Inc. (March 30, 2007). Maryland RFP, see: "Final Report Of The Technical Consultant On The 2005-2006 RFPs For Standard Offer Service." Boston Pacific Company, Inc. (May 25, 2006).

Default service procurement plans are designed to ensure competitive bidding – for instance, by establishing minimum thresholds for the number of bidders or volume of interest, and caps on the amount of load any supplier can bid on or ultimately serve. The particular plan pursued by the FirstEnergy Companies should be subject to appropriate safeguards, but should not be dismissed without justification. Those opposed to the plan must offer a reasoned case against it rather than demand that FirstEnergy disprove unsubstantiated assertions.

A. Repetitive procurement processes do not mean gaming

The contention that repeated procurement processes invite gaming by suppliers is another case where Staff offers an assertion in place of a supported argument. The procurements in question are presumably the default supply service auctions implemented in states such as New Jersey, Maryland, and Illinois.²⁵ In each of these states, the negotiated settlement agreements that restructured the electric industry included rate reductions and caps during a transition period to full retail access. At the time when these plans were put into effect, the up-front benefit provided to customers from rate reductions was deemed consistent with promoting retail competition because natural gas prices were very low and it was expected that competitive retailers offering supply

²⁵ Other jurisdictions using similar auction processes to procure default service supply include Delaware and the District of Columbia.

backed by new gas-fired generation could offer rates significantly below the embedded generation cost of the formerly vertically-integrated utilities.

As in Ohio, this expectation held during the early period of restructuring, and there was significant competitive retail activity. However, subsequent events have not turned out as expected. The steep rise of fossil fuel prices caused generation costs also to increase sharply, and market-based rates that retailers could offer became less competitive with respect to the regulated standard offer rates. Retail switching dropped, and legislators and regulators were faced with a difficult situation: the amount of retail activity was decreasing as transition periods were coming to an end. One alternative that would support a competitive retail market – increasing standard offer rates to reflect fully the underlying increases in generation costs – was rejected. Instead, legislators and regulators had to plan for utility default service that would serve a majority of load.

The solution was to require utilities to implement competitive procurement of default supply, through a process approved and monitored by the regulator. New Jersey and Illinois developed procurements based on a "descending clock" auction, in which suppliers state a willingness to serve load at a going price. The going price falls in each round of the auction in which the total supply need is oversubscribed by bidders. Maryland developed a request-for-proposals, or "RFP", process, in which suppliers submit price offers to serve a portion of default load. The Basic Generation Service Auction in New Jersey has been

used to procure supply and set the default service price for electricity since 2003.²⁶ The Maryland RFP processes for each distribution utility were established at the beginning in 2003, for supply beginning in 2004. The Illinois procurement process was implemented at the end of 2006 for supply beginning in January 2007.

Each of these procurement processes was designed explicitly to minimize the potential for gaming by bidders, with specific consideration of the fact that the process would be repeated.²⁷ In fact, the auction structure – with prequalification of bidders, well-defined rules, common access to data, etc. – has been chosen precisely because it is suited to repeated application. The economics of auctions is well-established, with a wide variety of real world applications at every scale. Auctions are useful for selling or buying highly uniform products on a repeated basis, including commodities and commodity-like products, such as computer memory chips. Large scale auctions are also used by governments to sell debt instruments (e.g., U.S. Treasury bills), radio spectrum, and other resource rights (e.g. to drill for oil on government land). Contrary to the implication of Staff's comments, it is precisely in the case of repeated application that auctions are particularly valuable.

²⁶ The first BGS Auction was held in 2002, during the last year of the New Jersey transition period. In that year the auction determined the generation *supply* cost, but did not determine retail rates. The 2003 BGS Auction was for supply beginning August 2003.

²⁷ The Illinois Auction apparently will not be repeated, following negotiated settlements with the participating utilities. A case filed with FERC to determine the competitiveness of the auction process was not concluded, as the Illinois Attorney General, who had made the initial filing, requested that the case not proceed in light of the negotiated settlements.

Staff asserts that with repeated procurements, "[s]uppliers can gain significant knowledge about one another's bidding strategies, inviting tacit collusion." (Staff Comments, Page 12). This blanket statement is not generally true of repeated auctions, and is certainly not true for a well-designed procurement mechanism. The auction processes used for procuring default electricity service supply have strict rules concerning the behavior of bidders, and include explicit prohibitions on communication of sensitive information and on any sort of coordinated bidding action. The potential costs from being caught in an act of *explicit* collusion are so great that this sort of market manipulation is extremely unlikely.²⁸ Regarding *tacit* collusion (or more appropriated tacit coordination), good auction design anticipates this potential and carefully controls the amount and type of information available to bidders. Taking the example of the New Jersey BGS Auction, information provided to bidders during the course of the auction is restricted in such a way that it is infeasible for one bidder to make inferences concerning the behavior of other bidders in such a way as to manipulate the auction result anti-competitively. Close scrutiny of bidding behavior in real-time, and retrospectively, by the Auction Manager and the Auction Monitor ensures that bidder activity conforms to expectations based on competitive models.

²⁸ Colluding bidders likely would be prohibited from participation in other supply procurements for the given process, as well as supply procurements elsewhere. The bidders could face criminal prosecution, FERC penalties, and civil suits.

An assertion that a specific procurement mechanism allows for coordinated action must be supported by some evidence, or it must be discarded.

B. The Role of Demand Response

Demand response can and should play a critical role in the functional operation and discipline of an organized market. In order to encourage additional demand response, certain barriers in the current regulation overlaying the marketplace must be addressed – primarily the mitigation regime that artificially restrains prices from reflecting actual supply and demand conditions in the market. While administrative retail demand response programs may be considered and adopted within states, wholesale demand response is best achieved through the development of a market that reflects true market values, both for supply and demand.

In organized electric markets, how prices are formed is critical to the functionality of the market and must be the primary driver for any changes or improvements considered for those markets. For instance, while there may be market elements implemented that foster long-term contracting or demand response, both are best enabled by clear price signals reflecting views of supply and demand over various periods of time. As experience has shown, organized

electric markets are best structured to support and incent demand response products.²⁹

Given the importance of demand response, and the responsiveness of customers to demand response when faced with true market signals, Staff's position offers the lack of demand response as evidence that markets are not working. Staff, however, does not trust those market signals and argues for a return to the old regulatory regime, with prices based on average costs. How can such a situation promote demand response? Providing all customers with time of use meters is fine, but the expenditures on such meters will be of little value if consumers are shielded from the true (marginal) costs of their consumption decisions in real time.

The inelasticity of short-run electricity demand, which Staff points to as evidence that retail markets are not competitive, is irrelevant. First, if retail rates are artificially capped below market, customers will have little incentive to adjust their consumption. Hence, one will observe inelastic demand and a relative lack of demand response. Only if prices are allowed to reflect their true, marketbased levels, in all hours, without artificial price caps or average cost pricing

²⁹ "PJM reported that demand response achieved on August 2, its record peak day, "reduced wholesale energy prices by more than \$300 per megawatt-hour (MWh) during the highest usage hours." It estimated that the reductions in use resulted in system-wide savings in energy payments of \$230 million during the peak hours that day, and more than \$650 million in energy payments for the week. ISO-NE analyzed the effect of demand reductions on locational marginal prices (LMPs) for the months of April to September, during the hours with interruptions when demand response was called. It estimated a \$1.74/MWh average decrease in LMPs for those months." FERC 2007 Assessment of Demand Response and Advanced Metering (September 2007) <u>http://www.ferc.gov/industries/electric/indus-act/demand-response.asp</u>.

under a regulated regime, will demand response flourish at the retail level, as it clearly has flourished at the wholesale level.

C. Market Liquidity

At the same time that Staff questions the liquidity of wholesale markets "given that wholesale market differentiates electricity by both time and location" (page 14), it also requests a workable definition of liquidity and the influence of specific entities on market clearing prices. Liquidity is perhaps less important than workable competition, which means that individual suppliers cannot unduly influence market clearing prices. The fact that there are numerous hours and repeated transactions does not mean liquidity is reduced. Baseload generators, for example, will sell electricity into the market at all hours. Peaking units, on the other hand, will sell electricity only when demand and market prices are high. As for locational price differences, these are important to send appropriate market signals as to where new investment in transmission, generation, and demand response capacity are most valuable. The alternative would be average pricing, which would fail to provide accurate market signals.

Staff is right to be concerned about the effects of market power. However, that is the reason for independent market monitors in all RTOs, including PJM and MISO, as discussed below.

D. Evidence from Ancillary Services Market Analysis

MISO has submitted an application to FERC to implement ancillary services markets for Regulating Reserves, Spinning Reserves and Supplemental

Reserves.³⁰ Spinning Reserves and Supplemental Reserves are referred to collectively as Contingency Reserves. The MISO proposal submitted to FERC includes the affidavit of Dr. David Patton, the MISO Independent Market Monitor ("IMM"), which explains changes to the MISO monitoring plan and mitigation measures for application to the proposed ancillary services markets,³¹ and also summarizes the IMM's market power analysis of the proposed markets.³² Staff extracts several references from the market power analysis summary to support its contention that wholesale markets are "evolving and premature" (Staff Comments, Page 14). Once again, Staff makes a contention with virtually no support, omitting key details and presenting a distinctly misleading picture.

The main conclusions summarized in Dr. Patton's affidavit regarding the proposed ancillary services markets and the potential for the exercise of market power include the following:

 "The proposed market design will enable the region to more efficiently satisfy reliability requirements." (Patton Affidavit, Para. 13);

³⁰ Other jurisdictions use different terms for corresponding ancillary services. Regulating Reserves are often called balancing reserves, and are used to balance, or adjust generation output to accommodate minute-to-minute changes in load. Spinning Reserves are sometimes referred to as synchronized reserves, and must be available on very short notice, typically 10 minutes, as is the case in the MISO proposal. Supplemental Reserves, or non-synchronized reserves, have a longer response time, but like Spinning Reserves can be used to respond to system contingencies such as the outage of another generating unit or some other unexpected event. Both generation and demand response resources can be qualified to provide Spinning and Supplemental Reserves in the MISO proposal.

³¹ Midwest Independent Transmission System Operator, Inc. Electric Tariff Filing To Reflect Ancillary Services Markets, Docket No. ER07-1372-000, Affidavit of David B. Patton, Ph.D. (September 14, 2007).

³² "Market Power Study for the Midwest ISO's Proposed Ancillary Services Markets", Potomac Economics, Ltd., September 2007.

- "The proposed co-optimization of the Ancillary Services and Energy markets will improve pricing during shortage conditions" (Para. 15);
- "I conclude that the Midwest ISO ancillary services markets for Regulating Reserves and Contingency Reserves can be expected to operate competitively when the default geographic scope of the entire Midwest ISO region is considered." (Para. 52);
- "...I conclude that when localized requirements are enforced and import of reserves into the local area is limited, substantial localized market power concerns arise that warrant mitigation measures." (Para. 54); and,
- "The existing conduct-and-impact mitigation framework, which has been used successfully for the Energy Markets, will be extended to accommodate the proposed Ancillary Services Markets. (Para. 57)

Thus, the Market Monitor concludes that the proposed ancillary services markets will improve pricing incentives and support system reliability, that the markets will be competitive when transmission constraints are not binding, and that potential market power under local transmission constrained areas can be addressed through extension of the existing mitigation framework.

Staff's comments imply that no market requiring monitoring and mitigation would be sufficiently competitive to support supply procurement for default electricity service. This is simply not credible. It is true that there is ample scope for improving wholesale markets so that the need for price mitigation is reduced, for instance by increasing the responsiveness of demand, as discussed above, and as recognized in FERC's Advanced Notice of Proposed Rulemaking (ANOPR) regarding the organized RTO/ISO wholesale markets.³³ Yet

³³ Federal Energy Regulatory Commission, "Wholesale Competition in Regions with Organized Electricity Markets," Advanced Notice of Proposed Rulemaking, Dockets RM07-19-000 and AD07-7-000, June 22, 2007.

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incremental market improvements cannot eliminate the need for a market monitor and a mechanism to mitigate potential market power when load is high and supply is constrained. Because transmission capacity is a limited resource, load pockets created by extreme system conditions will likely continue to be a concern for the RTO/ISO markets. Appropriate market pricing when supply is scarce – which will be facilitated in MISO through the proposed ancillary services markets – will improve incentives for new investment and responsive demand, reducing the need for administrative intervention.

E. Market Monitoring

Staff expresses a lack of confidence that market monitoring in the centralized markets is effective in mitigating market power. Certainly the noted public dispute between PJM's Market Monitor and PJM management can only serve to reinforce such concern. But it is important to emphasize that the PJM Market Monitor has not claimed that market power has gone unmitigated in PJM because of any action, or lack of action, on the part of PJM management.

FERC's ANOPR on the organized market addresses a number of issues related to the related to the independence and appropriate functions for market monitors. As is made clear from the ANOPR itself, and from many comments on the ANOPR subsequently submitted to FERC, there is as much concern that market monitors are over-mitigating market prices as there is that market power is under-detected or under-reported. For instance, the ANOPR states, with reference to administrative intervention in price formation, "[c]ertain commenters

were concerned that such mitigation is being conducted without an adequate theoretical or empirical basis, and is having a deleterious effect on the electric power market." (ANOPR, Par. 117).

A truly independent market monitor is essential to ensuring that market outcomes are efficient. It is also important that the transmission operator be truly independent, so that transmission operation, pricing and planning support unbiased, competitive markets. While the evidence indicates that MISO and PJM wholesale markets are competitive and fully able to support competitive default service supply procurements, we anticipate that the FERC initiatives will improve the operation and transparency of the organized markets, allowing for reduced reliance on overly intrusive intervention in the price formation process.

F. Joint and Common Market

Staff further claims that so-called "seams" issues between MISO and PJM may impede PJM suppliers from participating in the proposed auction (page 16). Staff states that, while prices in the two RTOs generally track each other closely, they have "observed significantly uncorrelated hourly price movements for nodes that are electrogeographically [sic] adjacent, but separated by the boundary between MISO and PJM" (page 16).

Since Staff provides no supporting data, we cannot verify Staff's conclusions, or even how it has defined "significantly uncorrelated hourly price movements." However, it is not surprising that there may be some hours in which prices in adjacent nodes may not be perfectly correlated, such as when

one of two generating plants shuts down for a scheduled outage, or suffers a forced outage. Similarly, there may be different transmission constraints that cause prices to diverge in some hours.

VII. Conclusions

Staff has questioned just about every aspect of wholesale and retail electric markets, without realizing that many of the "problems" they have discovered are a direct result of regulatory policies, such as mandatory retail price caps. Moreover, Staff has proposed definitions of "just and reasonable" prices that defy common sense: "just and reasonable" prices cannot always be below the prices that would prevail in a competitive market. Not only is that impossible, it contradicts the foundation of economic regulation, which is to mimic the outcome of competitive markets.

When markets are allowed to function properly, real-time prices are inherently more variable than long-term prices, but both are important aspects of a balanced portfolio of products that allow market participants to assume and manage the risks that reflect market fundamentals of supply and demand. Based on their own supply and demand expectations, all market participants may have varying mixes of short- and long-term contracts, as well as the ability to serve demand with their own resources. Mitigation dampens price signals to both suppliers and buyers; it offers a seemingly cost-free regulatory hedge, while discouraging the development of appropriate market-based risk management tools and degrading the need for a long-term bilateral contract market. When

prices are artificially limited in the short-term market, there is less incentive and ability to make long-term investments or seek a balanced portfolio to hedge short-term price volatility.

Ultimately, Staff would "turn back the clock," and return Ohio to a prerestructuring world in which captive ratepayers bore all financial risks, rather than investors. Staff would abandon the proven discipline of the marketplace in favor of heavy-handed regulation, the results of which led to significant cost overruns in the past and contributed to the push for restructuring in the first place. Simply put: wholesale electric markets work, and are working well in PJM and MISO. First Energy's proposed competitive procurement will enlist market forces for the benefit of retail customers, and not to their detriment.

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Collin Cain, M.Sc. Manager

Summary of experience

Collin Cain is a Manager in the Energy Practice at Bates White, LLC. Mr. Cain specializes in supply contract and asset valuation, and in forensic analysis in litigation support. He has extensive experience developing risk analysis and energy market pricing models. He has applied these models in a variety of consulting assignments to value generation assets and power supply contracts, and in development of hedging strategies and estimation of damages. Mr. Cain's expertise also includes RFP design, and auction development and implementation.

Areas of expertise

- Energy
- Economic, Regulatory and Market Analysis
- Power Market Modeling
- Power Procurement Strategy, Implementation and Forensic Analysis

Selected experience

- Submitted affidavit in FERC proceedings regarding the bidding behavior and clearing prices in the 2006 Illinois Auction. The Auction was conducted to procure electricity for distribution to the retail customers of Ameren's Illinois utilities and Commonwealth Edison Company. The affidavit addressed allegations of a lack of competitiveness, collusion, and excessive prices in the Auction.
- Served as testifying expert on market modeling before the Massachusetts Department of Telecommunications and Energy on behalf of Commonwealth Electric. Testimony supported analysis of Commonwealth Electric's stranded costs and buyout options for legacy power purchase agreements.
- Produced pro forma valuation for the non-nuclear portion of the Connecticut Yankee nuclear site. Study considered unique site value and costs for a new generating plant,

Collin Cain, M.Sc. Bates White, LLC Page 2 of 5

project financing costs, and the future competitive environment including market energy and capacity prices.

- Directed new coal generation feasibility study for proposed investment in the Four Corners region of New Mexico. The analysis included market demand, competing supply, availability and cost of electrical transmission, cost and deliverability of coal, availability of water, and environmental concerns.
- Produced detailed cash flow valuation of the TNP One generation plant for Texas-New Mexico Power Company to support litigation strategy with respect to stranded costs.
- Developed RFP documents and evaluation procedures for the Ontario Ministry of the Environment's 2500MW RFP. Directed economic evaluation of proposals, including forward estimates of energy market revenues and contingent capacity support payments, and transmission upgrade cost impacts for all possible portfolios.
- Served as testifying expert and produced expert report for Oglethorpe Power Corporation (OPC) in litigation proceedings between OPC and LG&E Power Marketing (LG&E) regarding LG&E's economic analyses prior to entering into long-term power purchase and sale agreement.
- Managed a multi-disciplinary team in the development of a new pricing mechanism for liquid fuels in South Africa. The work, performed for the South African Department of Minerals and Energy, established pricing methods and regulatory accounts to ensure that fuel prices appropriately reflect costs, and enhance industry investment incentives.
- Directed various power market projections, including: study of economic benefits for the Niagara Power Project (NYPA); cost-benefit analysis of fish protection alternatives related to fueling of Salem Generation Station (PSE&G) and Indian Point Nuclear Power Plant (Entergy) and to the operation of Danskammer Point Generating Station (Dynegy).
- Developed probabilistic risk management model for market price forecasting, asset valuation and power supply cost analysis. Adapted and implemented the model in applications for Central Maine Power Company, Oglethorpe Power Corporation, Vermont Yankee Nuclear Power Corporation, Commonwealth Electric Company, and Connecticut Yankee Atomic Power Company. Analyses included forecasting market clearing energy and capacity prices, and estimating hedge values for retained capacity, new unit construction, power supply bids, and financial derivatives.

Collin Cain, M.Sc. Bates White, LLC Page 3 of 5

- Consulted on asset valuation alternatives and stranded cost recovery strategy, including the application of an auction appraisal of generation assets, for Niagara Mohawk Power Corporation.
- Managed the Data and Rate Design Committees and Backup Bidding Team for the annual auctions of New Jersey Basic Generation Service (BGS). Participated in development of auction process, rules and protocols, and regulatory filings. Directed bidder information procedures and auction Data Room Team.
- Quantified effects on New Jersey of the prospective merger between PSEG and Exelon Corp as part of a comprehensive cost-benefit analysis for the NJ BPU. Effects included wholesale price impacts from changes to nuclear plant availability, direct costs to the state arising from planned staff reductions, and reductions in PSE&G's regulated cost of service arising from estimated merger synergies.
- Estimated benefits of competition in electric markets through four empirical analyses, and quantified the dollar benefits to Maryland consumers of wholesale competition in PJM and state retail restructuring.
- Conducted extensive analyses for PG&E in refund proceedings related to the California energy crisis. Examined impacts of the calculation and application of mitigated market clearing prices (MMCPs) in the determination of refunds owed by generators selling into the California markets.
- Directed study reviewing current methods of load profiling for retail settlement and energy imbalance services in the U.S. and Canada. The work was included in a series of load profiling studies for Japan's Ministry of Economy, Trade, and Industry.
- For ISO-NE, the NYISO and PJM Interconnection, in the evaluation of the proposed centralized resource adequacy model (CRAM): assessed capacity cost recovery for varied market conditions and implications for timing and frequency of capacity auctions.
- Conducted an analysis of reserve margin impacts on energy price volatility in the development of a power supply procurement process for Acquirente Unico, the Italian electric market single buyer.
- Directed analysis of optimal market hedge ratios by customer class for Dayton Power and Light. Analysis examined risk exposure due to price-driven customer migration under proposed retail access program.
- Conducted detailed modeling of short- and mid-term power supply needs and economic evaluation of supply alternatives (e.g., power supply offers, self-build, standard market

Collin Cain, M.Sc. Bates White, LLC Page 4 of 5

products) for Oglethorpe Power Corporation. The analysis determined the expected cost and the risk profile of alternative portfolios.

- Provided analytical support for RFP design and portfolio evaluation in the Ireland 500 MW capacity procurement.
- Performed strategic consulting work for Baltimore Gas & Electric (BG&E). Prepared expert testimony submitted in Maryland electric utility restructuring proceedings and consulted on utility regulatory strategy. Addressed market impact and economic rationale of competition policy, strategic aspects of asset disposition, stranded cost recovery, and retail access.
- Assisted the development and implementation of BG&E's solicitation of standard offer supply service. Estimated market energy and capacity prices in a 15-year forecast applying a proprietary linear programming/optimal system expansion model.
- Conducted a comprehensive review of the retail access experience in New England states. Developed state-by-state profiles that outlined the regulatory regime, transition period, standard-offer and default-service provisions. Evaluated end-user and supplier exposure to variable market prices.
- Provided consulting services to Niagara Mohwark Power Corporation on the modeling of transaction value for outsourcing standard offer service.
- Evaluated the competitive market of potential suppliers for PSE&G's auction of standard offer supply.
- Advised on the theoretic foundations of economic cost concepts and regulatory applications in avoided cost cases for a group of northeast electric utilities.
- Evaluated measures of competitiveness in present and future wholesale power markets and developed several models for use in assessing forward product prices for a large U.S. public power company.
- Participated in power purchase prudence analyses for PG&E, Nevada Power Company, Texas New Mexico Power Company, and Public Service Company of Colorado.

Expert testimony

• Submitted testimony in FERC proceedings regarding the bidding behavior and clearing prices in the 2006 Illinois Auction.

Collin Cain, M.Sc. Bates White, LLC Page 5 of 5

- Served as testifying expert before the Massachusetts Department of Telecommunications and Energy on behalf of Commonwealth Electric Company regarding the forecasting of future market energy prices.
- Served as testifying expert regarding contractual intent on behalf of Oglethorpe Power Corporation in an arbitration proceeding against LG&E.
- Testified before the Maryland House Economic Matters Committee regarding proposed power plant emissions regulations.

Professional experience

Prior to joining Bates White, Mr. Cain served as a Consultant at National Economic Research Associates (NERA). In this position, he conducted a variety of power sector analyses in NERA's energy practice. Mr. Cain also served as an Economist with Jones Lang Wootton USA, where he directed economic research and market analysis for a range of corporate clients. Previously, Mr. Cain was a Consultant with Apogee Research, where he conducted economic impact analyses, and participated in a variety of transportation and environmental economics consulting assignments.

Education

- M.Sc., Economics, London School of Economics
- B.A., Economics and Political Science Specialist, University of Toronto

Professional associations

American Economic Association

Speaking engagements

- Law Seminars International, Managing the Modern Utility Rate Case conference, "Nuclear Power in Future Electric Rate Cases", 2006
- Marginal Cost Working Group (utility group on application of marginal cost pricing to rate design). "Applications of Probabilistic Price Modeling." 2004.
- American PowerNet. "The 2004 BGS Auctions." 2003.
- Iberdrola S.A. "RTO Formation in the Central and Southeast United States." 2003.
- Companhia Energetica de Pernambuco. "Risk Analysis in U.S. Power Markets." 2000.

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Jonathan A. Lesser, Ph.D. Partner

Summary of experience

Dr. Jonathan Lesser is a Partner with Bates White, LLC, with more than 20 years experience working for electric utilities, government, and as an economic consultant. He has addressed critical economic and regulatory issues affecting the energy industry, including gas and electric utility structure and operations, mergers and acquisitions, cost allocation and rate design, resource investment decision strategies, cost of capital, depreciation, risk management, incentive regulation, economic impact studies, and general regulatory policy.

Dr. Lesser has designed complex models to value nuclear, fossil fuel, and renewable generating assets, as well as long-term power contracts in the presence of market, regulatory, and environmental uncertainty. He has also actively participated in negotiations for qualifying facilities under PURPA, relicensing of hydroelectric plants, and electric industry market design. Dr. Lesser has testified in Alaska, Arkansas, Connecticut, Illinois, Maryland, New Jersey, Ohio, Oklahoma, Rhode Island, and Vermont; before the Federal Energy Regulatory Commission (FERC); before regulators in Mexico and Puerto Rico; in commercial litigation cases in Arizona, Vermont, and Washington; and before legislative committees in Maryland, Texas, Vermont, and Washington. He is the coauthor of *Fundamentals of Energy Regulation*, published in 2007 by Public Utilities Reports, Inc.

Areas of expertise

- Cost of capital, return on equity, and capital structure
- · Cost of service, depreciation, cost allocation, and rate design
- Regulatory policy and market design
- Generating asset valuation
- Risk management
- Environmental strategy analysis
- Market power analysis
- Economic impact analysis
- Commercial damages estimation

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 2 of 14

Selected expert testimony

Constellation Energy Commodities Group, LLC.

- FERC rate proceeding regarding rate application for ancillary services by Ameren Energy (*Re: Ameren Energy Marketing Company and Ameren Energy, Inc.*, Docket Nos. ER07-169-000 and ER07-170-000)
- Subject: Analysis and testimony on appropriate "opportunity cost" rates for ancillary services, including regulation service and spinning reserve service. Case settled prior to testimony being filed.

Suiza Dairy Corporation and Vaquería Tres Monjitas, Inc.

- Rate proceeding before the Office of the Milk Industry Regulatory Administration
- Subject: Analysis and testimony on the appropriate return on equity for regulated milk processors in the Commonwealth of Puerto Rico.

DPL Inc.

• Proceeding before the Ohio Board of Tax Appeals (DPL, Inc. and its subsidiaries v. William W. Wilkins, Tax Commissioner of Ohio, Case No. 2004-A-1437)

Subject: Economic impacts of generation investment and qualification of electric utility investments as "manufacturing" investments for purposes of state investment tax credits.

IGI Resources, LLC and BP Canada Energy Marketing Corp.

• FERC rate proceeding regarding the rate application by Gas Transmission Northwest Corporation (*Re: Gas Transmission Northwest*, Docket No. RP06-407-000)

Subject: Natural gas supplies, economic lifetime, and depreciation rates.

ITC Midwest, LLC

• FERC rate proceeding regarding the sale of IPL Corp.'s transmission assets to ITC Midwest, LLC, and transmission rates to be established thereof (Docket Nos. EC07-89-000 and ER07-887-000)

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 3 of 14

Subject: Analysis and testimony on the appropriate return on equity and capital structure to be set for ITC Midwest, LLC.

Baltimore Gas and Electric Co.

• Maryland Public Service Commission (Case No. 9099)

Subject: Standard Offer Service pricing. Testimony focused on factors driving electric price increases since 1999, and estimates of rates under continued regulation

• Maryland Public Service Commission (Case No. 9073)

Subject: Stranded costs of generation. Testimony focused on analysis of benefits of competitive wholesale power industry.

• Maryland Public Service Commission (Case No. 9063)

Subject: Optimal structure of Maryland's electric industry. Testimony focused on the benefits of competitive wholesale electric markets. Presented independent estimates of benefits since 1999.

Pemex-Gas y Petroquímica Básica

• Expert report in a rate proceeding. Presented analysis before the Comisión Reguladora de Energía on the appropriate return on equity.

BP Canada Marketing Corp.

• FERC rate proceeding regarding the rate application by Northern Border Pipeline Company (*Re: Northern Border Pipeline*, Docket No. RP06-072-000)

Subject: Natural gas supplies, economic lifetime, and depreciation rates.

Transmission Agency of Northern California

• FERC rate proceeding (Re: Pacific Gas & Electric Company, Docket No. ER05-1284-000)

Subject: Analysis of appropriate return on equity, capital structure, and overall cost of capital. Case settled prior to filing expert testimony.

• FERC rate proceeding (Re: Pacific Gas & Electric Company, Docket Nos. ER03-409-000, ER03-666-000)

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 4 of 14

Subject: Analysis and development of recommendation for the appropriate return on equity, capital structure, and overall cost of capital.

State of New Jersey Board of Public Utilities

 Merger application of Public Service Enterprise Group and Exelon Corporation (I/M/O 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, BPU Docket No. EM05020106, OAL Docket No. PUC-1874-050)

Subject: Proposed merger between Exelon Corporation and PSEG Corporation. Testimony described the structure and results of a cost-benefit analysis to determine whether the proposed merger met the state's positive benefits test, and included analysis of market power, value of changes in nuclear plant operations, and merger synergies.

Sierra Pacific Power Corp.

• FERC rate proceeding regarding the rate application by Paiute Pipeline Company (*Re Paiute Pipeline Company* Docket No. RP05-163-000)

Subject: Depreciation analysis, negative salvage, and natural gas supplies. Case settled prior to filing expert testimony.

Matanuska Electric

• Regulatory Commission of Alaska rate proceeding (In the Matter of the Revision to Current Depreciation Rates Filed by Chugach Electric Association, Inc., Docket No. U-04-102)

Subject: Analysis of the reasonableness of Chugach electric's depreciation study.

Duke Energy North America, LLC

• FERC proceeding (Re: Devon Power, LLC, et al., Docket No. ER03-563-030)

Subject: Appropriate market design for locational installed generating capacity in the New England market to ensure system reliability.

Keyspan-Ravenswood, LLC

• FERC proceeding, KeySpan-Ravenswood, LLC v. New York Independent System Operator, Inc., Docket No. EL05-17-000

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 5 of 14

Subject: Estimation of damages arising from a failure by the NYISO to accurately calculate locational installed capacity requirements in New York City during the summer of 2002.

Electric Power Supply Association

• FERC proceeding (Re: PJM Interconnection, LLC, Docket No. EL03-236-002)

Subject: Analysis and critique of proposed pivotal supplier tests for market power in PJM identified load pockets.

Vermont Department of Public Service

- Vermont Public Service Board Rate Proceedings
 - Concurrent proceedings: Re: Green Mountain Power Corp., Dockets No. 7175 and 7176. Subject: Cost of capital and allowed return on equity under cost of service regulation, as well as under a proposed alternative regulation proposal.
 - Re: Shoreham Telephone Company, Docket No. 6914. Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.
 - Re: Vermont Electric Power Company, Docket No. 6860. Subject: Development of a least-cost transmission system investment strategy to analyze the prudence of a major high-voltage transmission system upgrade proposed by the Vermont Electric Power Company.
 - Re: Central Vermont Public Service Company, Docket No. 6867. Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.
 - Re: Green Mountain Power Corporation, Docket No. 6866. Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.

Pipeline shippers

• FERC rate proceeding (*Re: Northern Natural Gas Company*, Docket No. RP03-398-000) Subject: Gas supply analysis to determine pipeline depreciation rates as part of an overall rate proceeding. Jonathan A. Lesser, Ph.D. Bates White, LLC Page 6 of 14

Arkansas Oklahoma Gas Corp.

• Oklahoma Corporation Commission rate proceeding (Re: Arkansas Oklahoma Gas Corporation, Docket No. 03-088)

Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.

- Arkansas Public Service Commission rate proceedings
 - In the Matter of the Application of Arkansas Oklahoma Gas Corporation for a General Change in Rates and Tariffs, Docket No. 05-006-U. Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.
 - In the Matter of the Application of Arkansas Oklahoma Gas Corporation for a General Change in Rates and Tariffs, Docket No. 02-24-U. Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.

Entergy Nuclear Vermont Yankee, LLC

• Vermont Public Service Board proceeding (Re: Petition of Entergy Nuclear Vermont Yankee for a Certificate of Public Good, Docket No. 6812)

Subject: Analysis of the economic benefits of nuclear plant generating capacity expansion as required for an application for a Certificate of Public Good.

Central Illinois Lighting Company

• Illinois Commerce Commission rate proceeding (*Re: Central Illinois Lighting Company*, Docket No. 02-0837)

Subject: Analysis and development of recommendations for the appropriate return on equity, capital structure, and overall cost of capital.

Citizens Utilities Corp.

• Vermont Public Service Board rate proceeding (Tariff Filing of Citizens Communications Company requesting a rate increase in the amount of 40.02% to take effect December 15, 2001, Docket No. 6596)

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 7 of 14

> Subject: Analysis of the prudence and economic used-and-usefulness of Citizens' longterm purchase of generation from Hydro Quebec, including the estimated environmental costs and benefits of the purchase.

Dynegy LNG Production, LP

• FERC proceeding (Re: Dynegy LNG Production Terminal, LP, Docket No. CP01-423-000). September 2001

Subject: Analysis of market power impacts of proposed LNG facility development.

Missouri Gas Energy Corp.

• FERC proceeding (Re: Kansas Pipeline Corporation, Docket No. RP99-485-000)

Subject: Gas supply analysis to determine pipeline depreciation rates as part of an overall rate proceeding.

Green Mountain Power Corp.

- Vermont Public Service Board rate proceedings
 - In the Matter of Green Mountain Power Corporation requesting a 12.93% Rate Increase to take effect January 22, 1999, Docket No. 6107. Subject: Analysis of the appropriate discount rate, treatment of environmental costs, and the treatment of risk and uncertainty as part of a major power-purchase agreement with Hydro-Quebec.
 - Investigation into the Department of Public Service's Proposed Energy Efficiency Utility, Docket No. 5980. Subject: Analysis of distributed utility planning methodologies and environmental costs.
 - Tariff Filing of Green Mountain Power Corporation requesting a 16.7% Rate Increase to take effect 7/31/97, Docket No. 5983. Subject: Analysis of distributed utility planning methodologies and avoided electricity costs.
 - Tariff Filing of Green Mountain Power Corporation requesting a 16.7% Rate Increase to take effect 7/31/97, Docket No. 5983. Subject: Valuation of a long-term power purchase contract with Hydro-Quebec in the context of a determination of prudence and economic used-and-usefulness.

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 8 of 14

United Illuminating Company

• Connecticut Dept. of Public Utility Control proceeding (*Application of the United Illuminating Company for Recovery of Stranded Costs*, Docket No. 99-03-04)

Subject: Development and application of dynamic programming models to estimate nuclear plant stranded costs.

Selected business consulting experience

- For the California Energy Commission, developed a new policy approach to renewables feed-in tariffs and developed portfolio analysis models to develop an "efficient frontier" of generation portfolios for the state.
- For a major New York brokerage firm, performed a fairness opinion valuation of a gasfired electric generating facility.
- For a large municipal electric utility in Florida, analyzed real option values of alternative proposed purchased generation contracts whose strike prices were tied to future natural gas and oil prices, and developed contract recommendations.
- For another municipal electric utility in Florida, developed an analytical model to determine risk-return tradeoffs of alternative generation portfolios, identify an efficient frontier of generation asset portfolios, and recommended asset purchase and sale strategies.
- For several electric utilities, developed economic models to evaluate offers by bidders in divestitures of nuclear power plants.
- For Central Vermont Public Service Corp. and Green Mountain Power Corp., developed analyses of distribution capacity investments accounting for uncertainty over future peak load growth.
- For a major electric utility in Latin America, developed risk management strategies for hedging natural gas supplies with minimal up-front investment; prepared training materials for utility staff; and wrote the utility's risk management Policies and Procedures Manual.
- For a large owner and operator of nuclear generating plants, performed a confidential assessment of the likelihood of relicensing a specific nuclear plant in New England, given regulatory concerns over on-site spent fuel storage.

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 9 of 14

- For a large investor-owned utility in the Southeast, analyzed alternative environmental compliance strategies that directly incorporated uncertainty over future emissions costs, environmental regulations, and alternative pollution control technology effectiveness.
- For a Special Legislative Committee of the Province of New Brunswick, served as an expert advisor on the development of a deregulated electric power market.
- For the Bonneville Power Administration, developed models to assess the economic impacts of generation resource development in Washington State and Oregon.
- For an electric utility in the Pacific Northwest, assisted in negotiations surrounding relicensing of a large hydroelectric generating facility.
- Served as an expert advisor for the Northwest Power Planning Council regarding future power supplies and economic growth.

Other selected litigation experience

- For a major industrial firm, estimated the appropriate discount rate to use in estimating damages over time associated with a failure of the insurance companies to reimburse asbestos-related damage claims and the resulting losses to the firm's value.
- John C. Lincoln Hospital v. Maricopa County, September 2002. Performed statistical analysis to determine the value of a class of unpaid hospital claims.
- Catamount/Brownell, LLC. v. Randy Rowland, May 2003. Prepared an expert report on the damages associated with breach of commercial lease.
- Lyubner v. Sizzling Platters, Inc., September 2002. Performed an econometric analysis of damage claims based on sales impacts associated with advertising.
- Pietro v. Pietro, June 2002. Estimated pension benefits arising from a divorce case.
- Nat'l. Association of Electric Manufacturers v. Sorrell, September 1999. Testified on the costs of labeling fluorescent lamps and the impacts of labeling laws on the demand for electricity.

Professional experience

Prior to joining Bates White, Dr. Lesser was President of New England Economics Group. Previously, he has served in senior management roles as the Director of Regulated Planning with the Vermont Department of Public Service, Senior Managing Economist at Navigant Consulting, Inc., and Senior Economist and Manager, Economic Analysis, at Green Mountain Power Corporation. In addition, Dr. Lesser was a Lecturer at the School of Jonathan A. Lesser, Ph.D. Bates White, LLC Page 10 of 14

Business Administration at the University of Vermont and an Adjunct Associate Professor at the College of Business and Economics at Saint Martin's College. He started his career as an Economic Analyst at the Idaho Power Company and as an Energy Economist at the Pacific Northwest Utilities Conference Committee.

Education

- Ph.D., Economics, University of Washington
- M.A., Economics, University of Washington
- B.S., Mathematics and Economics (with honors), University of New Mexico

Professional activities

- Reviewer, Journal of Regulatory Economics
- Reviewer, The Energy Journal
- Reviewer, Northwest Journal of Business and Economics
- Reviewer, Contemporary Economic Policy

Professional associations

- Energy Bar Association
- International Association for Energy Economics

Publications

Peer-reviewed journal articles

- Lesser, J.A.. and X. Su, "Design of an economically efficient feed-in tariff structure for renewable energy development," *Energy Policy*, forthcoming.
- Lesser, J.A.: "The Economic Used-and-Useful Test: Its Origins and Implications for a Restructured Electric Industry," *Energy Law Journal*, 23, 349–382 (November 2002).

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 11 of 14

- Lesser, J.A., and C. Feinstein: "Electric Utility Restructuring, Regulation of Distribution Utilities, and the Fallacy of "Avoided Cost" Rules." *Journal of Regulatory Economics*, 15, 93–110 (January 1999).
- Lesser, J.A., and C. Feinstein: "Defining Distributed Utility Planning," *The Energy Journal*, Special Issue, Distributed Resources: Toward a New Paradigm, 41–62 (1998).
- Lesser, J.A., and R. Zerbe: "What Can Economic Analysis Contribute to the Sustainability Debate?" *Contemporary Policy Issues*, 13, 88–100 (July 1995).
- Lesser, J.A., and R. Zerbe: "The Discount Rate for Environmental Projects," *Journal of Policy Analysis and Management*, 13, 140–156 (Winter 1994).
- Lesser, J.A., and D. Dodds: "Can Utility Commissions Improve on Environmental Regulations?" *Land Economics*, 70, 63–76 (February 1994).
- Lesser, J.A.: "Estimating the Economic Impacts of Geothermal Resource Development," *Geothermics*, 24, 52–69 (Winter 1994).
- Lesser, J.A.: "Application of Stochastic Dominance Tests to Utility Resource Planning Under Uncertainty," *Energy*, 15, 949–961 (December 1990).
- Lesser, J.A.: "Resale of the Columbia River Treaty Downstream Power Benefits: One Road From Here to There," *Natural Resources Journal*, 30, 609–628 (July 1990).
- Lesser, J.A., and J. Weber: "The 65 M.P.H. Speed Limit and the Demand for Gasoline: A Case Study for the State of Washington," *Energy Systems and Policy*, 13, 191–203 (July 1989).
- Lesser, J.A.: "The Economics of Preference Power," Research in Law and Economics, 12, 131–151 (1989).

Books and contributed chapters

- Lesser, J.A., and L.R. Giacchino, *Fundamentals of Energy Regulation*, (Vienna, VA: Public Utilities Reports, 2007).
- Lesser, J.A., and R. Zerbe: "A Practitioner's Guide to Benefit-Cost Analysis," in F. Thompson (ed.) *Handbook of Public Finance*, (New York: Rowan and Allenheld ,1998), pp. 221–268
- Lesser, J.A., D. Dodds, and R. Zerbe: *Environmental Economics and Policy*, (Reading: MA: Addison Wesley Longman, 1997).

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 12 of 14

Trade press publications

- Lesser, J.A., "Blowin' in the Wind: Renewable Energy Mandates, Electric Rates, and Environmental Quality," *Natural Gas & Electricity*, October 2007, 26-28.
- Lesser, J.A., "No Leg to Stand On," Natural Gas & Electricity, August 2007, 28-31.
- Lesser, J.A., "Goldilocks Chills Out," Natural Gas & Electricity, July 2007, 26-28.
- Lesser, J.A., "Goldilocks and the Three Climates," Natural Gas & Electricity, April 2007, 22–24.
- Lesser, J.A., "Command-and-Control Still Lurks in Every Legislature," Natural Gas & Electricity, February 2007, 8–12.
- Lesser, J.A., and G. Israilevich, "The Capacity Market Enigma," *Public Utilities Fortnightly*, 147, 38-42 (December 2005).
- Lesser, J.A., "Overblown Promises: The Hidden Costs of Symbolic Environmentalism," *Livin' Vermont* 1, 7, 27 (January/February 2005).
- Lesser, J.A., "Regulation by Litigation," *Public Utilities Fortnightly*, 145, 24–29 (October 2004).
- Lesser, J.A.: "ROE: The Gorilla is Still at the Door," *Public Utilities Fortnightly*, 145, 19–23 (July 2004).
- Lesser, J.A., and S. Chapel: "Keys to Transmission and Distribution Reliability," *Public Utilities Fortnightly*, 144, 58–62 (April 2004).
- Lesser, J.A.: "DCF Utility Valuation: Still the Gold Standard?" *Public Utilities Fortnightly*, 142, 14–21 (February 15, 2003).
- Lesser, J.A.: "Welcome to the New Era of Resource Planning: Why Restructuring May Lead to More Complex Regulation, Not Less," *The Electricity Journal*, 15, 20–28 (July 2002).
- Lesser, J.A., and C. Feinstein: "Identifying Applications for Distributed Generation: Hype vs. Hope," *Public Utilities Fortnightly*, 140, 20–28 (June 1, 2002).
- Lesser, J.A., et al.: "Utility Resource Planning: The Need for a New Approach," *Public Utilities Fortnightly*, 140, 24–27 (January 15, 2002).
- Lesser, J.A.: "Distribution Utilities: Forgotten Orphans of Electric Restructuring?" Public Utilities Fortnightly, 137, 50-55 (March 1, 1999).

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 13 of 14

- Lesser, J.A.: "Regulating Distribution Utilities in a Restructured World," *The Electricity Journal*, 12, 40–48 (January/February 1999).
- Lesser, J.A.: "Is it How Much or Who Pays? A Response to Rothkopf," *The Electricity Journal*, 10, 17–22 (December 1997).
- Lesser, J.A., and M. Ainspan: "Using Markets to Value Stranded Costs," *The Electricity Journal*, 9, 66–74 (October 1996).
- Lesser, J.A.: "Economic Analysis of Distributed Resources: An Introduction," *Proceedings*, First Annual Conference on Distributed Resources, Electric Power Research Institute, Kansas City, MO, (July 1995).
- Lesser, J.A.: "Distributed Resources as a Competitive Opportunity: The Small Utility Perspective," *Proceedings*, First Annual Conference on Distributed Resources, Electric Power Research Institute, Kansas City, MO, (July 1995).
- Lesser, J.A., and M. Ainspan: "Retail Wheeling: Deja vu All Over Again?" The Electricity Journal, 7, 33-49 (April 1994).
- Lesser, J.A.: "An Economically Rational Approach to Least-Cost Planning: Comment," *The Electricity Journal*, 4 (October 1991).
- Lesser, J.A., and J. Weber: "Energy Efficiency in New Zealand: Issues and Appropriate Institutions for the Electricity Sector," Report to the New Zealand Ministry of the Environment, (June 1992).
- Lesser, J.A.: "Long-Term Utility Planning Under Uncertainty: A New Approach," Paper presented for the Electric Power Research Institute: *Innovations in Pricing and Planning*, (May 1990).
- Lesser, J.A.: "Centralized vs. Decentralized Resource Acquisition: Implications for Bidding Strategies," *Public Utilities Fortnightly*, (June 1990).
- Lesser, J.A.: "Most Value—The Right Measure for the Wrong Market?" *The Electricity Journal* 2, 47–51 (December 1989).
- Lesser, J.A., et al.: "Global Warming: Implications for Energy Policy," Washington State Energy Office, Energy Policy and Planning Research Series (July 1989).

Jonathan A. Lesser, Ph.D. Bates White, LLC Page 14 of 14

Selected speaking engagements

- "Alternative Regulatory Structures and Tariff Mechanisms: Practical approaches to providing low-cost, environmentally responsible energy and how to avoid some dangerous pitfalls," Western Energy Institute, October 1, 2007.
- "Economics and Energy Regulation," Law Seminars International, Washington, DC, March 15-16, 2007.
- "Energy in the Northeast: Resource Adequacy & Reliability," Law Seminars International, Boston, MA, October 16–17, 2006.
- "Energy in the Southwest: New Directions in Energy Markets and Regulations," Law Seminars International, Santa Fe, NM, July 14, 2006.
- "Energy and the Environment," Vermont Journal of Environmental Law, South Royalton, VT, March 10, 2006.
- "Electricity and Natural Gas Regulation: An Introduction," Law Seminars International, Washington, DC, March 17–18, 2005.

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VERIFICATION

Jonathan A. Lesser, Ph.D., being first duly sworn, on oath deposes and states that he is a Partner at Bates White, LLC; that he has read the above and foregoing; that he knows its contents; and that the same is true to the best of his knowledge, information, and belief.

Jonathan A. Lesser, Ph.D.

Subscribed and sworn to before me this 12th day of October, 2007

-kinustent Spelest Notary Public

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Summary: Comments Reply Comments of Constellation NewEnergy, Inc. and Constellation Energy Commodities Group, Inc. electronically filed by Howard Petricoff on behalf of Constellation Energy Commodities Group, Inc. and Constellation NewEnergy