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En Banc Hearing on the Current and Future Wholesale Electricity Markets

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Testimony of
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Introduction & Summary

On behalf of the members of the Electricity Consumers Resource Council, I want to thank the Commission for giving us the opportunity to participate in today's hearing. ELCON is the national association of large industrial consumers of electricity. We have a unique perspective on the issues addressed in this hearing. Our members operate major manufacturing facilities in all ISOs and RTOs, and in all regions of the country not served by an ISO or RTO. They also operate such facilities throughout the world and have first-hand experience with restructuring efforts in a global context. The purpose of my testimony is to challenge the assertion by many defenders of the organized markets such as PJM and MISO, that markets administered by ISOs or RTOs are "competitive."

ELCON was perhaps the earliest national group to advocate increased competition in the electric utility industry. Our members operate in competitive global markets and appreciate the efficiencies of open competition compared with poorly regulated centralized markets. However, after roughly a decade of experience with restructuring there are clear indications that the ISO and RTO markets are too costly,

not truly competitive, and fail to deliver net consumer benefits. It is certainly our organization's desire for real competition in the electric industry, but real competition simply has not happened and may not happen given the practical realities of the industry structure and asset ownership. Despite an attempt to design a wholesale market structure consistent with economic theory and capable of supporting real competition, the design that was actually implemented was short changed, creating the need for frequent regulatory intervention.

To summarize my remarks:

1. The fundamental objective of competition—and the creation of ISOs and RTOs was to deliver net benefits to end-use consumers.

2. The premium prices paid by consumers in organized markets cannot be explained based on any greater value provided by improved service quality, customer focus, innovation, reliability or other tangible factors that we would have expected from a truly competitive market.

3. Sending price signals based on marginal costs is meaningless if both the supply and demand sides of the market will not or cannot respond to those signals in ways that deliver tangible benefits to consumers.

4. The best evidence of "What Might Have Been under Regulation" is what has actually happened in the states that did not restructure or deregulate generation.

5. ISO/RTO markets cannot be deemed "competitive" if there is little or no price determination by the interaction of supply and demand.

6. There is no evidence that premium prices paid by consumers in organized markets assure them of greater resource adequacy than average cost-based rates under traditional regulation. Thus, if the organized markets do not improve the ability to finance new assets compared with traditional regulation and rate designs, they can hardly be called "competitive."

7. Customer choice in organized markets limits the choices of consumers to the wholesale spot price or the wholesale spot price plus a premium. This shifts the risk of price volatility of the marginal fuels to consumers.

8. Truly competitive markets do not allow competitors to play the "Reliability" Card unless there is a market failure.

ELCON has not been silent about our concerns with the organized markets. Since the first Day-Two markets were launched, we have repeatedly urged the Federal Energy Regulatory Commission to acknowledge that this market design is not working for the benefit of end-use consumers as required by the Federal Power Act. We urged FERC to:

- Demonstrate that one ISO or RTO can work for the benefit of consumers before the Day-Two market design is forced on other regions of the country;
- Initiate an inquiry into whether today's RTO platform, with locational pricing, can be made a viable market model for real wholesale competition;
- Acknowledge the magnitude of the problem and recognize that simple technical fixes or additional regulatory intervention will not correct the inherent problems;
- Acknowledge that, if real competitive markets cannot be achieved, the public policy debate should shift to what form of regulation is appropriate to deal with the unique challenges of the electric industry and states like Pennsylvania.

Finally, I would also note that ELCON has opposed the use of nodal or LMP pricing since it was first introduced in the infamous California restructuring proceeding in 1994. Our argument was—and remains—whatever the theoretical merits of the construct, it is too complex and opaque to be faithfully implemented in an adversarial environment. A decentralized bilateral framework might have been a more successful framework for a restructured industry.

A. The Fundamental Objective Of Competition—And The Creation Of ISOs And RTOs—Was To Deliver Net Benefits To End-Use Consumers

The defenders of organized markets bear the burden of demonstrating real evidence that competitive power markets have provided consumer benefits. While one benefit was supposed to be lower long-term prices compared with regulated rates, we also reasonably expected to see other benefits such as technological innovations, improved customer service, or the so-called "killer" products that are routinely delivered in truly competitive markets. But no such demonstration has been

forthcoming because the competitive environment that would bring them about is not there. Real competition has not been realized, and if it had, it should be self-evident. Restructuring has replaced a state regulatory regime that had at least some end-user focus and rates based on average costs with a costly ISO/RTO federal regulatory regime that has no end-user focus and rates based on the highest accepted bid, which need not be based on marginal cost. A reasonable expectation would have been that competitive markets would deliver benefits to end-use consumers vis-à-vis regulated markets.

B. The Premium Prices Paid By Consumers In Organized Markets Cannot Be Explained Based On Any Greater Value Provided By Improved Service Quality, Customer Focus, Innovation, Reliability Or Other Tangible Factors That We Would Have Expected From A Truly Competitive Market.

The results of customer satisfaction surveys of large end-users ("large key accounts") by a nationally recognized research firm vividly show that the failure to achieve these expectations has significantly changed the way that large consumers view restructuring. Specifically, since 1998—the year PJM went live as a FERC-approved ISO—the customer service scores in regulated states are considerably higher than those in restructured states for every factor measured in those surveys. This is shown in Tables 1 and 2 (*See* Appendix beginning on page 17). All factors improved in the regulated states, but there has been very little improvement in the restructured states with the exception of Account Manager and Price Satisfaction. This is shown in Table 3. Note that the results for improvements in "Price Satisfaction" are the same (9%) in regulated and restructured states. This tends to contradict the argument that large industrial dissatisfaction with restructuring is solely the result of large price increases of natural gas. The survey results paint a more complex picture that is counter-intuitive if almost any degree of real competition had emerged in the restructured states. Table 4 shows specific attributes with the largest performance gap between regulated and restructured states. One would expect that with only a small amount of real

competition—and greater customer focus—the scores would be higher in the restructured states. What is particularly disconcerting are the poor scores in restructured states for assistance in adopting new electro-technologies and other energy efficiency measures that would help business customers increase their competitiveness. Table 4 indicates that large customers receive better assistance with the adoption of new electro-technologies and being energy efficient in regulated states, and by wide margins (25 and 24%, respectively).

C. Sending Price Signals Based On Marginal Costs Is Meaningless If Both The Supply And Demand Sides Of The Market Will Not Or Cannot Respond To Those Signals

Much is made of the need to send actual price signals to promote economic efficiency. And this is often the main excuse for preserving a regime of LMPs instead of returning to rates based on average costs. Yet there is no meaningful evidence that the "price signals" are eliciting the expected response from the market. Real competitive markets respond quickly to the type of price increases experienced in the organized markets. We've seen little or none of this that warrants characterization as "competitive" behavior. There has been little market entry to eliminate transmission congestion or the entry of new baseload generation that target the wide price spread between the marginal units that burn natural gas and the baseloaded coal or nuclear units. This lack of entry contradicts claims of a "competitive" market and is more indicative of a real market failure. I argue that the growing number of wind energy projects in RTO queues does not count. The developers are chasing money handed out in Washington that gets leveraged by the growing number of state-mandated renewable energy portfolio (RPS) standards. And adding new natural gas fired units at the margin of the system is part of the problem, not the solution.

There seems to be a tendency in the electric industry—especially by federal regulators—that a problem must not exist if it cannot be fixed. The joint ownership of generation fleets and major transmission corridors, and the ubiquitous nature of load

pockets, probably cannot be fixed in our lifetime, if ever. But because those problems cannot be fixed does not make the markets sufficiently competitive.

There is a lot of talk in the industry about investing in Smart Grid or Advanced Metering to establish the necessary infrastructure for communicating price signals to small ratepayers. My point is that this is a clear admission that the capability is not already there. This begs an important policy question regarding the merits of forcing small customers into the wholesale spot markets—not to mention the political risk to regulators. To the extent such investments do materialize they are not likely to result in better price signals to unwilling ratepayers because they will insist on hedging those prices with a fixed price contract.

ELCON supports marginal prices created by real competitive markets. Competitive markets are created to determine efficient prices. If they were known in advance there would be no need to use competition. The LMPs in organized markets are not market prices that result from real competition. They are a form of bid-based rates that have to be second-guessed in an opaque, quasi-regulatory market monitoring process. We believe that rates in regulated markets should be based on cost of service.

D. The Best Evidence of "What Might Have Been Under Regulation" Is What Has Actually Happened In The Regulated States

The success of any transition from regulation to true competition should be self-evident given the claims that regulation produces inefficient results and does not promote innovation, and that competition produces efficient results and promotes greater innovation. And all else equal, competition in the long run should produce more efficient and lower prices. After ten years of experience in markets such as PJM or New York, success has been far from self-evident. As documented in the previous section, customer focus has significantly waned in the Deregulated States compared to the quality of customer services that continue in the Regulated States. This is counter-intuitive. There is also no innovation at the point of sale between the market for electrical energy and end users that has captured the imagination of consumers in the

same way that technological innovation has exploded after deregulation of telecommunications services. There is also circumstantial evidence that advances in smart metering and other technologies that might facilitate the marketing of new innovative services have in fact declined because it was the traditional regulated utilities that drove those advances in the past.[1]

Price trends at the retail level in FERC-approved organized markets have been the subject of considerable debate. Mandated stranded cost recovery (once euphemistically called "competitive transition charge"), legislatively imposed rate reductions, and rate freezes or caps tended to disconnect the rates or prices actually charged to many consumers from the wholesale prices. Some recent studies that purport to estimate the positive impact on retail rates of restructuring have resorted to far-fetched assumptions to get around the fact that the data simply does not support the claims.[2] It is possible to surmise "what might have been under regulation" for industrial rates and make an apples-to-apples comparison with what happened to a similarly situated load in a Deregulated State. Several utility systems overlap a Deregulated State in the footprint of a FERC-approved organized market and one or more Regulated States. The rates charged to similarly situated industrial loads in the Deregulated State can be directly compared with the rates charged under traditional rate regulation in the Regulated State. The first chart on page 19 of the Appendix shows Allegheny Energy, Inc. (APS) charges to industrial customers in both Maryland and West Virginia with an 85% load factor, in 1998 and in 2006. West Virginia consumers paid and still pay a fully bundled, state regulated cost of service rate. Maryland consumers paid comparable rates in 1998, but now pay a rate based on the PJM "market" clearing prices, irrespective of whether they continue to be served by APS or

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[1] *See* Federal Energy Regulatory Commission, *Assessment of Demand Response & Advanced Metering*, Staff Report, August 2006 at pages 125-133.

[2] *See*, for example, an excellent critique of one such study: Matthew J. Morey and Laurence D. Kirsch, "Beyond Belief: A Critique of the Cambridge Energy Research Associates Special Report 'Beyond the Crossroads: The Future Direction of Power Industry Restructuring'," Christensen Associates Energy Consulting, LLC, November 15, 2005.

are instead served by a third-party supplier. Costs to a similarly situated industrial consumer in Maryland are now almost double what they would be for the identical consumer located across the West Virginia border. Both are served by APS, and both APS operating subsidiaries share the same generating asset base, transmission infrastructure, operating costs, corporate overheads etc.

The comparison of Cinergy operating companies in the lower chart on page 19 of the Appendix shows the same effect. Cinergy Corporation owns Cincinnati Gas & Electric (Ohio) that operates in a restructured jurisdiction, and Public Service of Indiana and Union Light Heat & Power (Kentucky) both operate in regulated, cost-of-service jurisdictions. Costs have increased much more sharply in Ohio (restructured) than they have in Indiana or Kentucky (regulated). In 2000, industrial consumers with an 85% load factor in Indiana, Kentucky and Ohio would have paid $31/MWh, $33/MWh and $34/MWh respectively. In 2006, the same industrial consumers would be paying $38 per MWh in Indiana, and $42/MWh in Kentucky but $79/MWh in Ohio. All three Cinergy companies have similar generation profiles and other cost concerns, yet Ohio consumers pay almost double what the Indiana or Kentucky consumer pays.

E. ISO/RTO Markets Cannot Be Deemed "Competitive" If There Is Little Or No Price Determination By The Interaction Of Supply And Demand

An expected outcome of a competitive wholesale electricity market was that price-responsive end-use consumers would compete head-to-head with generators to establish market-clearing prices and would be paid compensation on an equivalent basis for the actual value provided to the market. Unfortunately this hasn't happen. Instead "demand response" has become the most studied topic in the history of the industry. Maybe it has been studied to death. There has been no end to the number of reports, surveys, conferences, initiatives, collaboratives, "national town meetings" and other efforts to jump-start this critical market function. The results have been simply a few ISO- or RTO-implemented demand-response programs.

It is important to emphasize that programs have been established, not markets. Consumers that elect to participate are forced into an administrative process with load-serving entities (LSEs) or ISOs and RTOs, in lieu of actual price competition with generators. While these programs certainly have some value as damage control measures for operationally flexible customers against high clearing prices, they are not a long-term substitute for the levels of demand elasticity that are necessary for truly competitive markets.

Price responsive load is essential for optimizing market and grid operating efficiencies—a cardinal benefit of competition. This cannot be done by the supply side alone in a one-sided market because it is necessary to identify consumers' willingness to pay in the price discovery process. Price-responsive load must have access to the price-setting mechanisms of the short-term energy and ancillary services markets without restrictions that would create a bias for the bids of generators. Even minimal participation during high-priced hours can substantially reduce LMPs during those hours and reduce the cost of hedging products going forward.

While FERC speaks a good line on the need for demand response, its actions suggest less enthusiasm for reasons that are unclear. Demand response should have been a feature of every ISO/RTO energy market the day those markets were approved. FERC's long drawn out rulemaking process beginning in 2007 first with an ANOPR, then in 2008 with the NOPR and now with six pending compliance filings in 2009 does not do justice to consumers who needed relief from pricing volatility years ago.

Active resistance to demand response is pervasive within the governance structures of ISOs and RTOs where the placement of dots and commas in tariffs are argued endlessly, with a coalition of heavily fortified suppliers who would lose money if loads were dispatched off, rather than generation dispatched up. There is a need for greater recognition that demand response has tremendous merit in any context: market or regulation. Demand response will constrain marginal generation costs in any viable market design. Only the generators would not want that and it may be inevitable that

they will claim new "missing money" resulting from lower spot prices when and if demand response does become a standard feature of the industry.

F. There Is No Evidence That Premium Prices Paid By Consumers In Organized Markets Assure Them Of Greater Resource Adequacy Than Average Cost-Based Rates Under Traditional Regulation.

In the transition from regulation to competition, we expected fewer—not a greater number of—barriers to finance new generation. The expectation was that a robust, liquid forward market would enable long-term contracts out to the economic life of assets—a feature that is reasonably duplicated by a rate base under cost of service regulation. Under either arrangement, prices (or rates) tend toward average costs. Thus, if the organized markets do not improve the ability to finance new assets compared with traditional regulation and rate designs, it can hardly be called "competitive."

The premium prices paid to generators in organized markets—including capacity payments—do not appear to be working. For example, there is no evidence in the 2008 Long-Term Reliability Assessment (2008-2017) by the North American Electric Reliability Corporation (NERC) that proposed investments in regions with ISOs and RTOs are superior (or better) than regions that remain under traditional regulation and where generation is financed under cost of service. If premium prices were necessary for resource adequacy one would expect reserves in regions served under traditional regulation to trend downward in the out years of the NERC forecast relative to regions served by organized markets. NERC data does not show any such trend.

G. Customer Choice In Organized Markets Limits The Choices Of Consumers To The Wholesale Spot Price Or The Wholesale Spot Price Plus A Premium. This Shifts The Risk Of Price Volatility Of The Marginal Fuels To Consumers.

We originally envisioned a market in which both suppliers and consumers would hedge commodity price volatility with long-term bilateral contracts. Long-term forward markets decrease spot market prices and enhance efficiency. In fact, one of the

authors of nodal (LMP) pricing assumed the same.[3] The robust, liquid forward market created with those contracts would provide investors with the same or better price security as a traditional utility rate base. It didn't happen. Instead, for all practical purposes, consumers that need to hedge the commodity price risk simply can't do so. Their choice is simple. Take the unbundled spot price (the highest bid clearing the market) or take a contract based on estimates of the same spot price bundled with a huge risk premium. That is not a hedge – and it certainly is not the result of a competitive market. And to add insult, industrial consumers are finding that the benefits of self-generation, perhaps the most reliable hedge in the past, are being taken away through premature repeal of PURPA based on exaggerated claims of competition.

H. Truly Competitive Markets Do Not Allow Competitors To Play The "Reliability" Card Unless There Is A Real Market Failure.

Some advocates of the organized markets now allege that the core mission of ISOs and RTOs was solely "to maintain electric system reliability for consumers in Pennsylvania and throughout the region."[4] PJM-the-Power-Pool has a long history beginning in 1927. This predates PJM's operation as an ISO or RTO by seven decades. I find it hard to believe that the organization waited until 1998 to make reliability its number one priority. ISOs, and later, RTOs, were established to be the platform for competitive electricity markets or what was once called "retail wheeling." I can appreciate attempts by PJM and MISO staffs to realign each organization's core mission

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[3] Professor William Hogan noted in comments before the California PUC in 1994 that his LMP-based market design (*i.e.,* Poolco) required a "complementary" bilateral market:

> … [B]oth the coordination of POOLCO and the commercial freedom of the bilateral market must operate in complementary fashion. One cannot function well without the other, nor are they in conflict. Closer inspection finds that *the POOLCO model assumes the existence of a vigorous bilateral market* … .[3] [emphasis added]

See William W. Hogan, "An Efficient Bilateral Market Needs A Pool," *Comments on the Blue Book Regarding Competitive Wholesale Electric Markets: Role, Structure and Efficacy*, Hearings Before the California Public Utilities Commission, August 4, 1994.

[4] *Testimony of Andrew Ott*, Senior Vice President, PJM Interconnection, Pennsylvania Public Utility Commission, *En Banc* Hearing, October 23, 2008

with the reality that competition has been largely a failure in the industry. Such realignment is important and will only succeed when consumers in the footprints of each ISO and RTO are served by entities that can be demonstrated to be more cost effective, reliable and accountable than the predecessor power pools and utilities.

Respectfully submitted,

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Appendix

TQS Research, Inc.
2006 National Utility Benchmark
Service to Large Key Accounts[5]

Table 1

Comparing Overall Satisfaction in Restructured States to Regulated States									
Status of Deregulation	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
States Not Active	64%	64%	67%	67%	71%	71%	71%	73%	76%
States on Hold	59%	57%	65%	58%	63%	66%	60%	67%	62%
Deregulated States	55%	53%	55%	54%	52%	54%	56%	57%	57%

Table 2

2006 Customer Service Factor Scores			
	Regulated States	**Restructured States**	**Gap**
Overall Efficiency	67%	43%	24%
Overall Satisfaction	76%	57%	19%
Overall Handling Contact	77%	60%	17%
Power Quality	82%	68%	14%
Overall Reliability	83%	71%	12%
Overall Price Satisfaction	54%	41%	13%
Overall Satisfaction with Account Manager	92%	83%	9%

[5] Reproduced with Permission of TQS Research, Inc., Atlanta, GA. Beginning in 1994, TQS Research, Inc. has interviewed the largest energy users in the US concerning their perceptions of their electric suppliers. The population consists of manufacturing customers over 1 MW, hospitals over 3 MW and major universities over 10 MW. The results of approximately 6,000 interviews per year allow TQS to provide the Electric Utility Industry with a Benchmark indicating their performance relative to approximately 60 other electric utilities. This approach allows TQS's clients to compare their results on 61 questions to the results of the other suppliers in the US. These questions cover the overall measurements of Customer Satisfaction, Loyalty, and Value. They also cover the functions measuring Energy Efficiency, Price, Reliability, Power Quality, Account Manager Performance, Handling Customer Inquiries, and Image.

TQS Research, Inc.
2006 National Utility Benchmark
Service to Large Key Accounts

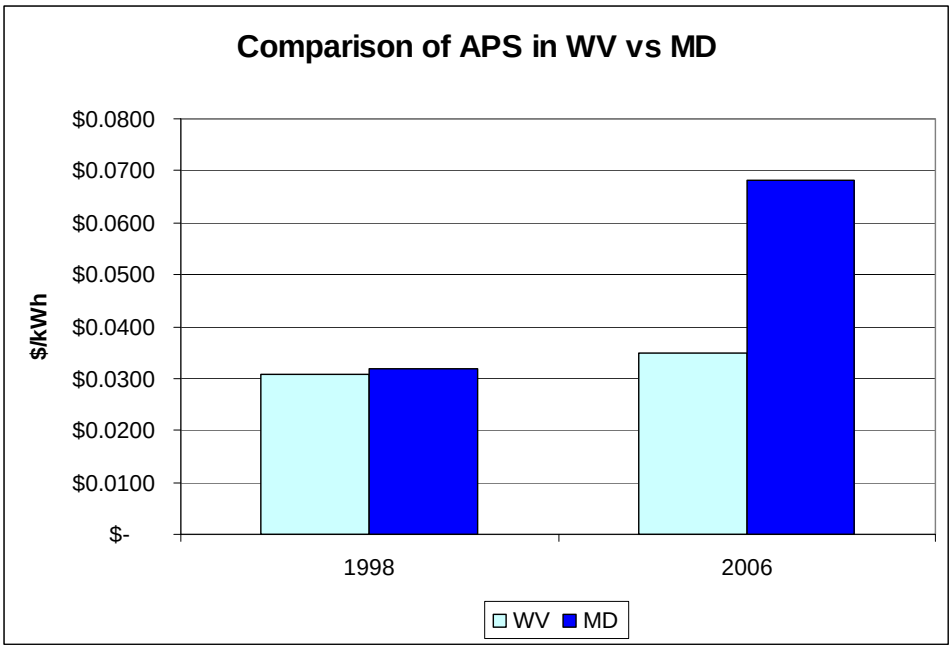
Table 3

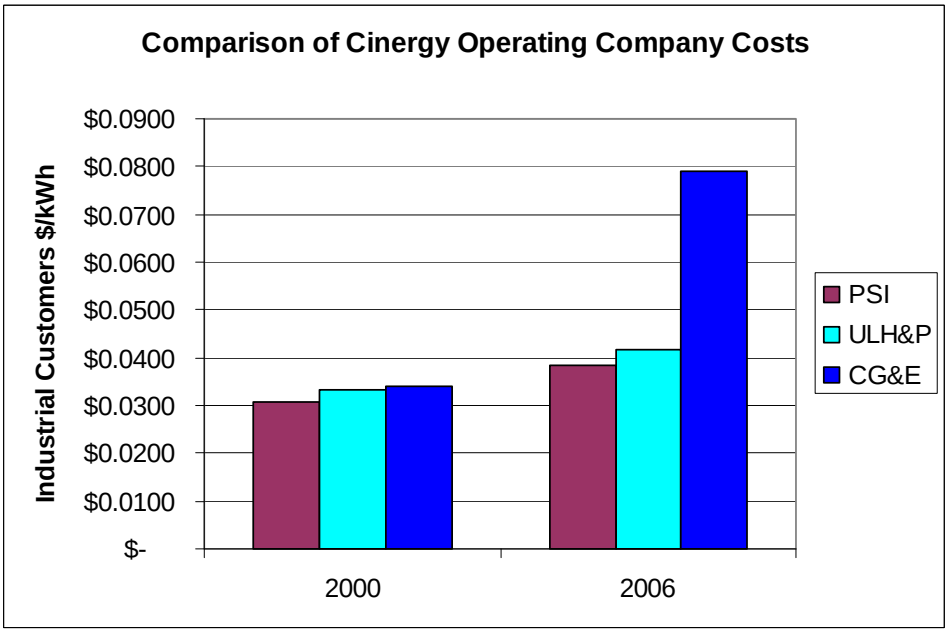
Factor Trends in Regulated States Compared to Restructured States						
	Regulated States			Restructured States		
	2006	1998	Improvement	2006	1998	Improvement
Overall Efficiency	67%	50%	17%	43%	43%	0%
Overall Reliability	83%	75%	8%	71%	71%	0%
Power Quality	82%	69%	13%	68%	66%	2%
Overall Price Satisfaction	54%	45%	9%	41%	32%	9%
Overall Satisfaction with Account Manager	92%	79%	13%	83%	76%	7%
Overall Handling Contact	77%	65%	12%	60%	63%	-3%
Overall Satisfaction	76%	64%	12%	57%	55%	2%

Table 4

2006 Attribute Scores			
	Regulated States	Restructured States	Gap
Assist with New Electro Technology	61%	36%	25%
Assistance on Being Energy Efficient	65%	40%	24%
Providing Efficiency Information	73%	51%	23%
Providing Creative Solutions	73%	53%	20%
Power Quality Assistance	79%	60%	20%
Follow-up	72%	53%	19%
Flexibility	71%	53%	18%

Comparison of Industrial Rates in Regulated Versus Restructured State [6]





[6] Source: Portland Cement Association, Comments On The Electric Energy Market Competition Task Force Draft Report, Docket No. AD05-17-000 ("Wholesale and Retail Electric Competition").