

BEFORE THE SENATE OF PENNSYLVANIA
CONSUMER PROTECTION and PROFESSIONAL
LICENSURE COMMITTEE

Testimony of

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Regarding

Results of Deregulating the Electric Utility Industry
in Pennsylvania

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Chairman Tomlinson, Chairman Boscola and Members of the Committee:

Thank you for the invitation to appear before you this morning to present testimony regarding my view of the results of deregulating the electric utility industry in Pennsylvania. The results are not good, particularly for our manufacturers that employ thousands of Pennsylvania residents, and they have the potential to get much worse when the economy recovers.

Right now, wholesale electric prices are down because of the most severe recession since the Great Depression has caused a steep reduction in energy demand and commodity prices. When the economy recovers, power demand and commodity prices will increase, and wholesale electric prices will follow. Before the recession, wholesale electric prices were so high that, had rate caps expired on June 27, 2008, residential customers would have seen their rates go up by 73.1%. Rates for commercial customers would have gone up by 92.0%. And the electric rates for Pennsylvania's industrial customers would have more than doubled, with a rate increase of 102.6%.¹ The average rate increase across all customer classes would have been 89.2%. Note that these numbers reflect the increase to *overall* electric rates, including the distribution rates that are still regulated. The increase to the generation component of electric rates would have been much higher than what these numbers reflect. The potential economic transfer from Pennsylvania consumers to the power generation sector could have been in excess of \$12.2 billion per year.² But we were lucky. The economy crashed, and we were temporarily spared from rate increases of this magnitude. However, and this is the main point of my testimony, the underlying problems – the structural deficiencies of the wholesale market and the absence

¹ Pennsylvania Public Utility Commission's flashcut analysis of 6/27/08;

http://www.state.pa.us/electric/pdf/PriceEstimates/Electric_Price_Estimates081408.pdf

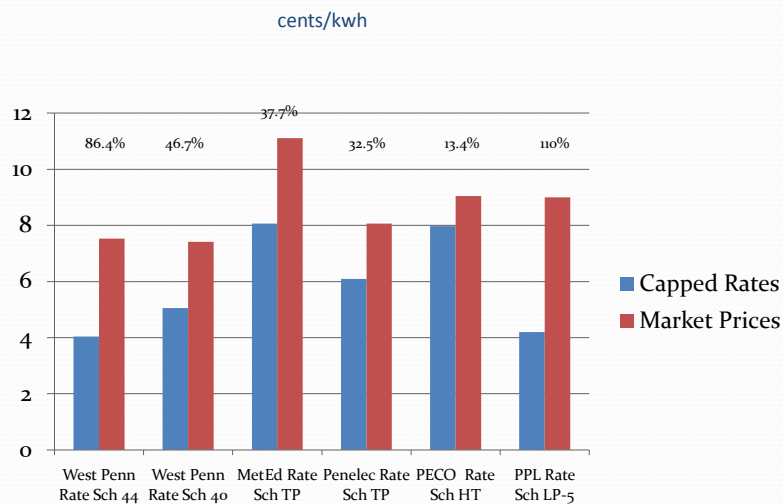
² Aggregate sales of 151.5 billion kWh (2007) x 89.2% of the average retail price (2007) of 9.08 cents per kWh.

of any meaningful regulation at the retail level in Pennsylvania -- have not changed. As soon as the economy recovers and power demand and commodity prices increase³, electric prices will follow.

Thus far, the results of deregulation have not been good. When Wellsboro Electric's rate caps expired in 2003, residential customers were hit with an 85% increase. The next year, Citizens' Electric's residential rates increased 64%. Pike County's residential customers experienced a 72% increase when their rate caps expired in 2006. Penn Power's residential rates increased 33% in 2007. Even with depressed wholesale power prices in the midst of the current recession, recent results have not been good. Three months ago, PPL's *overall* residential rates (including generation, transmission and distribution) increased 30%. PPL's residential *generation* rates actually increased over 50%.

Industrial customers have been hit even harder. Even in the midst of the recession, and even after shopping, PPL's large industrial customers are paying over 50% more for their electric supply. A recent (January 2010) comparison of capped rates with market prices for Pennsylvania's large industrial customers follows. This table compares capped rates in December 2009 with market prices in January 2010. Less than 24 months ago, in June 2008, the projected rate increases for an average sized industrial customer was over 100%.

³ The future development of the Marcellus Shale could result in lower gas prices in the 13-state PJM footprint; however, the impact on future gas and electric prices in this region is speculative at this point.



Source: PA PUC Bureau of CEEP Analysis

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I respectfully submit that the number of customers who are shopping, or the number of marketers operating in Pennsylvania, are not the yardsticks that should be used to measure the success (or lack thereof) of deregulation. Some customers may be shopping, but all customers, shopping or not, are paying *higher* rates for their electric supply. The Electricity Generation Customer Choice and Competition Act of 1996⁴ was supposed to deliver *lower* prices for customers. The preamble (Declaration of Policy) of the Act stated that rates in Pennsylvania were higher than the national average; that competition would be more effective than regulation in controlling the cost of electricity; that the “cost of electricity is an important factor in decisions made by businesses concerning locating, expanding and retaining facilities in this Commonwealth”; and that the Commonwealth must transition to greater competition “to benefit all classes of

⁴ Electricity Generation Customer Choice and Competition Act, 66 Pa. C.S. §§ 2801 *et seq.*

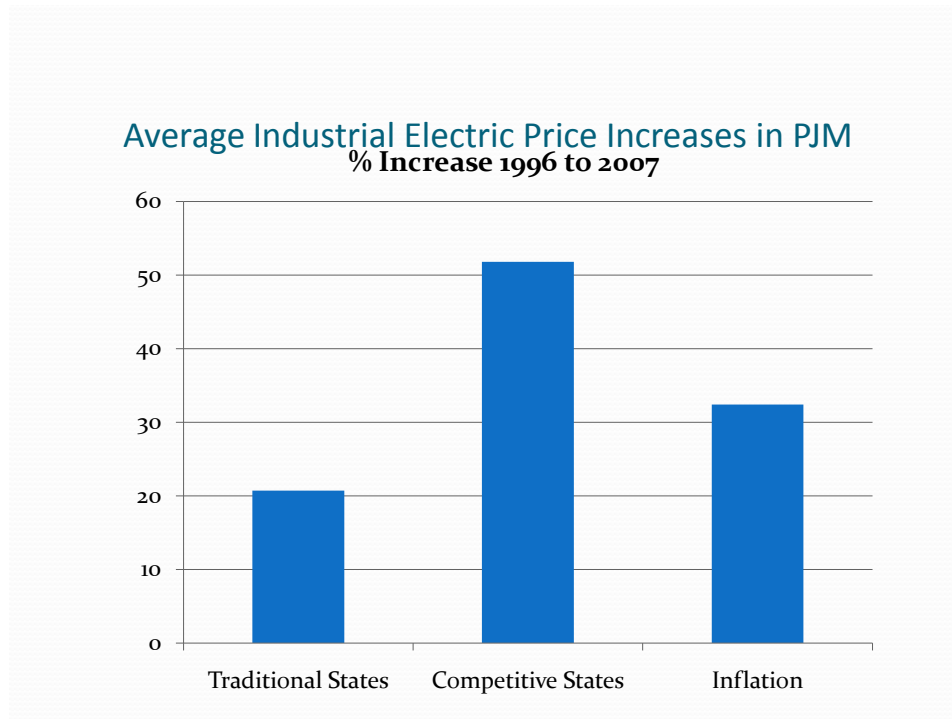
customers and to protect this Commonwealth's ability to compete in the national and international marketplace for industry and jobs." 66 Pa.C.S. § 2802.

By January 1, 2011, when the last rate caps expire, all Pennsylvania customers will be paying for electricity at prices derived from wholesale power markets, primarily from PJM. The problem is that today's PJM does not look anything like the PJM that was in place in 1996 when Pennsylvania decided to deregulate. Instead of being primarily the cost-based energy exchange that existed in 1996, PJM has morphed into a highly complex series of artificial pricing mechanisms, all short-term in nature, under which the cost of producing power bears little or no relationship to wholesale electric prices. These wholesale prices are paid by all load serving entities, utilities and retail suppliers (marketers), and simply passed through to Pennsylvania customers. Because marketers obtain their power for shopping customers in the same wholesale market where utilities buy power for non-shopping customers, competition at the retail level will produce little or no savings over the long term.⁵

States do not have to defer to the prices established in the wholesale market. Electric rate increases in PJM states with traditional cost-based retail rate regulation have been substantially lower than the rate increases in deregulated states, which simply pass through wholesale prices to their customers. This is particularly true for large employers:⁶

⁵ The savings currently offered by marketers in PPL's service territory are due simply to differences in the timing of purchases from the wholesale market, as opposed to the efficiencies produced by competition. PPL bought power for non-shopping customers in 2010 over a period of many months, including several months when power prices were high.

⁶ Source: U.S. Energy Information Administration http://www.eia.doe.gov/cneaf/electricity/st_profiles/

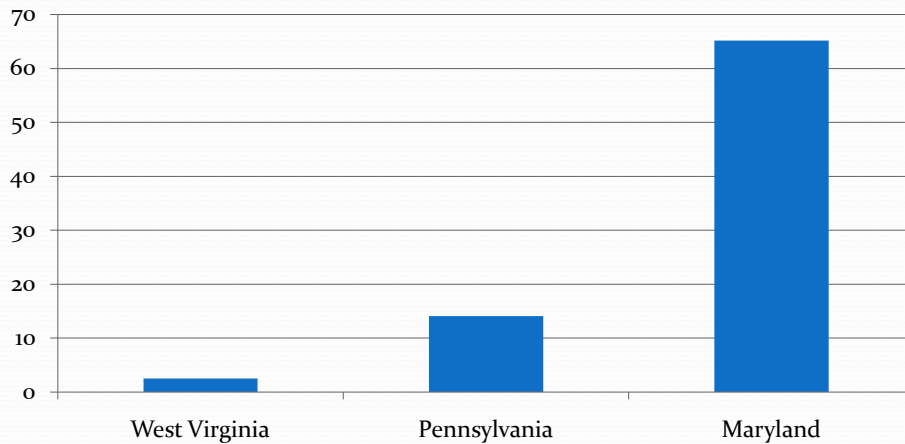


Narrowing this down to three contiguous states, to follow are the average rate increases for all customer classes in Pennsylvania, Maryland and West Virginia from 1996 to 2007.⁷ West Virginia is a traditional regulated state, and during this period Pennsylvania's rates largely were still capped (a form of regulation). In contrast, Maryland was fully deregulated. Maryland experienced average rate increases of about 65% from 1996-2007, while during the same period West Virginia's rates increased less than 5%.

⁷ *Id.*

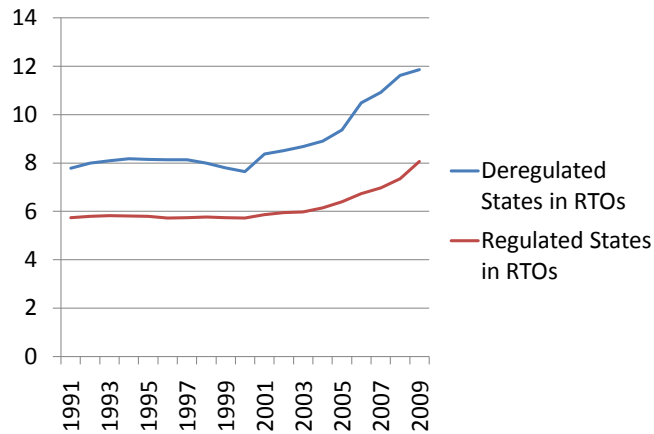
Average Electric Price Increases in Pennsylvania, Maryland and West Virginia

% Increase 96 to 07



On a national scale, the steep increase in prices in restructured (deregulated) states operating in a regional transmission organization (RTO) such as PJM shows a disturbing trend:

Average Revenue per kWh Regulated States vs. Deregulated States



Years are 12-month periods ending in September per form EIA-826.
 Source: American Public Power Association Report "Retail Electric Rates in Deregulated and Regulated States," March 2009, updated January 2010.

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We do not have to continue to rely on PJM’s artificial pricing mechanisms to create just and reasonable rates for our consumers, and to provide new capacity to provide reliable service to customers. Pennsylvania is one of a small, diminishing number of states that continues to place faith in these newly created pricing mechanisms to provide a reasonably priced and reliable power supply. I am not aware of any state with traditional regulation that is considering a move to deregulation. Many states that, like Pennsylvania, deregulated in the excitement of the Enron Era in the 1990’s, are exploring ways to blunt the effect of high “competitive” rates.⁸ Of the approximately 20 states that initially adopted

⁸ Virginia, Arkansas, New Mexico, Arizona, Nevada, California, Oregon and Montana have suspended retail choice completely. In Illinois the General Assembly created a power authority and required utilities to refund over \$1.0 billion to customers; in Michigan Act 286 of 2008 limited retail choice to no more than 10% of sales; Texas has delayed regulation in areas within the Southwest Power Pool; the Maryland Legislature passed a bill to allow the PSC to order the construction of new generating capacity, and the Governor is encouraging the PSC to take such action; the Maine PUC recently issued an RFP for long-term contracts for capacity and energy; the Delaware General Assembly passed the Electric Utilities Retail Supply Act of 2006 that requires Delmarva to conduct Integrated Resource Planning and to file a proposal to obtain long-term supply contracts; the Connecticut

deregulation, many have taken actions to reverse their decisions, including the formation of state power authorities. Pennsylvania is increasingly isolated, one of a small and diminishing number of states that continue to forge ahead with the grand experiment of electric deregulation with little or no modification.

Under deregulation, we essentially have turned over control of the reliability of our power supply – what gets built, when it gets built, where it gets built – to short-term market forces. Planning for the reliability of electric supply is a long-term proposition, but PJM’s artificial pricing mechanisms for wholesale power are all short-term. We cannot rely on a short-term market to produce positive long-term results. In addition to high prices, short-term price signals make it very difficult to raise capital to finance and build a new capital-intensive generating plant.

“Lack of forward visibility of capacity values and revenue streams makes the financing of any new merchant project both challenging and more expensive, if not impossible, in a capital raising environment such as the one we are in.” Larry Kellerman, Goldman Sachs;
Address to the 2009 Annual Meeting of the
Organization of PJM States, Inc.

Just prior to adopting deregulation in 1996, Pennsylvania was at the end of a large capital-intensive build-out of base load generation facilities. A significant number of new nuclear units had been added to the generation mix, including the Susquehanna, Beaver Valley, Limerick, and Perry generating units. In addition, the last wave of our new capital-intensive waste coal-fired facilities came on-line

Legislature passed a bill that has resulted in the construction of three new power plants, using RFPs for long-term contracts.

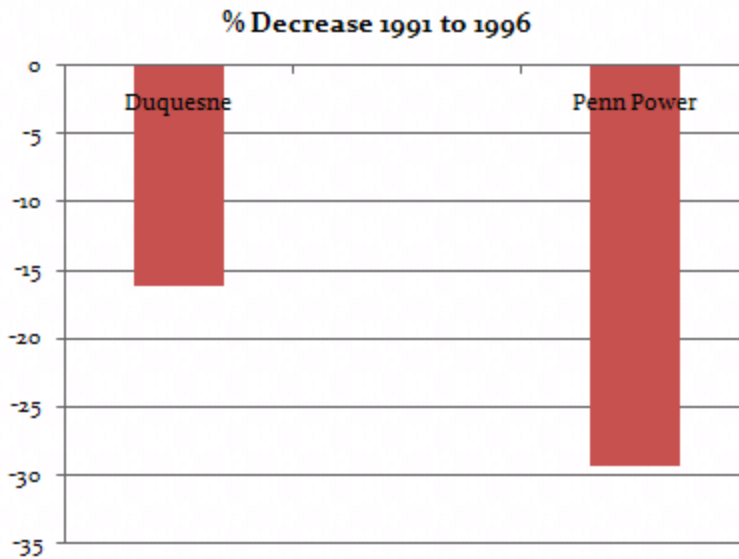
under our highly successful IPP program.⁹ Under this program, all of the development, construction and operational risks were transferred to the project developers under performance-based contracts. Pennsylvania was well on its way to shifting the risk of power generation facility performance to third parties, instead of ratepayers, as was done under the old rate base, rate-of-return methodology.

We also had very healthy reserve margins in excess of 25%. Our electric rates were higher than the national average, but this was expected because we had just finished a capital-intensive generation expansion. Basically, rates were at their peak when Pennsylvania chose to go down the path of generation deregulation in 1996. These high rates then were locked-in under generation rate caps, as customers continued to pay the capital costs of the units that supposedly had been stranded by competition. If Pennsylvania had not deregulated generation in 1996, the nuclear units would have been close to being fully depreciated today, and it is likely that retail rates would be falling, rather than rising, as rate caps expire. The following table shows the regulated rate decreases for Duquesne and Penn Power's residential customers between 1991 and 1996, *before* rates were capped and *before* the Competition Act was passed:¹⁰

⁹ 14 of the country's 18 waste coal units are located in Pennsylvania. To date, these facilities have processed over approximately 125 million tons of waste coal, and there are approximately 2 billion tons more of waste coal to be processed.

¹⁰ Source: Electric Utility Operational Report, PaPUC Bureau of Conservation, Economics and Energy Planning.

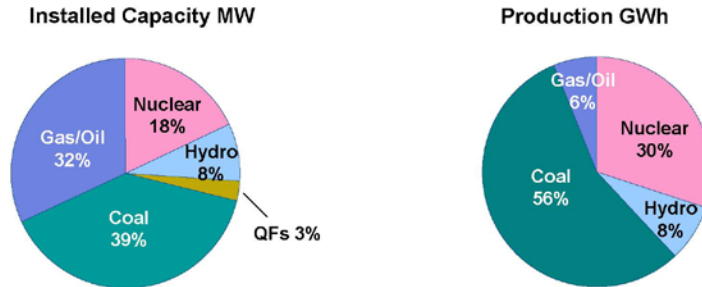
Residential Electricity Bills (500kWh usage) Actually Decreased Under Regulatory Model between 1991 and 1996, when adjusted for inflation



There is no doubt that some of these new nuclear facilities were expensive, that there were cost overruns, and excess capacity adjustments, but Pennsylvania was positioned for reliable power at stable rates for years to come. As the units depreciated, over time we would have benefited from the lower operating costs associated with nuclear and coal-fired facilities.

That was then. Now, turn the page and look at where we are today. Reserve margins are dropping, and customers will be paying higher rates, not lower rates, for power when rate caps expire, despite having paid for the capital costs of the generating fleet in Pennsylvania through pre-1996 depreciation and post-1996 stranded costs. Customers will be buying power from these units at rates higher than the rates that would have been established under regulation. A startling illustration of the disconnect under deregulation between the costs incurred by a generator to produce power, and the price that the generator now receives in the “competitive” wholesale market is found in the following two slides from PPL’s website in 2007 (since removed):

PPL Supply Business Overview



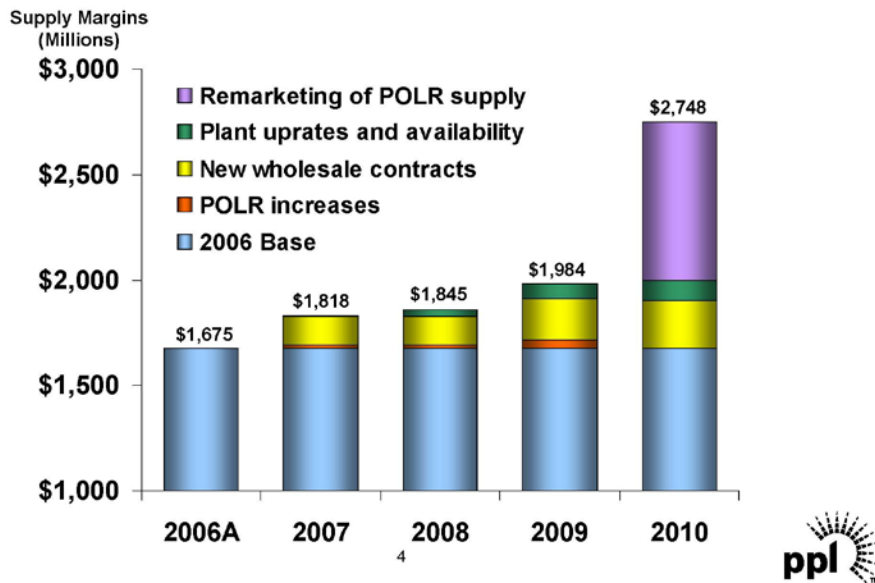
- In 2007, 94% of our owned generation output is expected to be produced at a fuel cost of approximately \$16/MWh or less.

Source: PPL website 3rd quarter 2007
A-5



This slide reveals that, in 2007, PPL was able to produce power from 94% of its generating fleet for 1.6 cents per kwh. If PPL's rates were still regulated, this power be sold to ratepayers based on PPL's costs of producing it (fuel, O&M, capital depreciation, plus a return on capital investment). Compare this with the next slide:

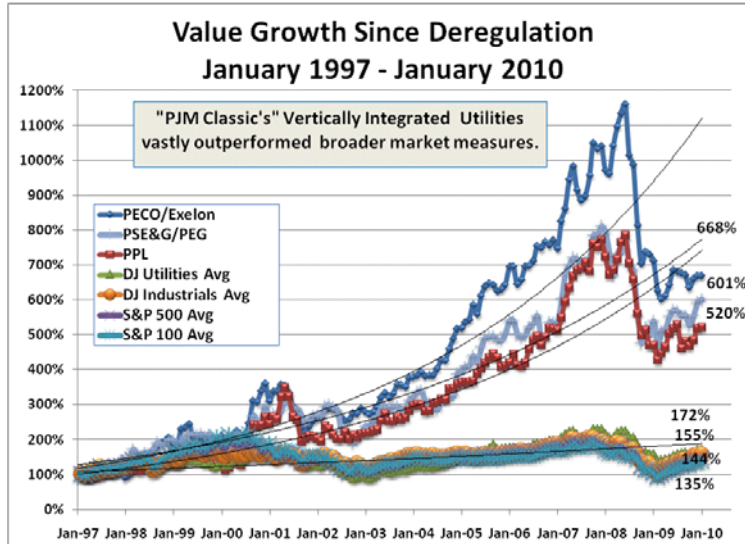
Key Drivers of Margin Growth



This slide shows PPL's expectation that, in 2010, after rate caps expired, its margin (profit) would increase from \$1.98 billion to \$2.75 billion as a result of its ability to sell its power at PJM wholesale prices rather than at capped rates. Both of these slides came from presentations that PPL made to investors in 2007.

PPL's experience is not unique and I do not mean to single out PPL for criticism. The profits of generating companies in general have seen dramatic increases when released from the "chains" of regulation into a market where all generators are paid top dollar and the forces of competition do not act as a check on prices. Consider the next slide:

PJM RTO Created a New Class of Super Stocks



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This slide illustrates the point that utilities in PJM have vastly outperformed broader market measures since 1997. It demonstrates that we cannot rely on the wholesale power market to control prices. PJM's pricing mechanisms are not designed to produce just and reasonable rates for customers. Rather, prices in PJM's wholesale market are designed to produce the highest possible prices for generators. They are the product of complex and artificial mechanisms under which all generators are paid the price submitted by the highest bidder during any given hour.¹¹

¹¹ Under PJM's pricing formula for energy, the locational marginal pricing, or LMP mechanism, all generators are paid rates based upon the highest cost unit at any given time. For example, assume that the system load is 10,000 MW, and 9,999 MW of low cost nuclear or coal-fired generation is offered at 2.5 cents per kWh. If 1 MW of gas-fired generation is needed to meet the full load of 10,000 at a bid price of 10 cents per kWh, then all 10,000 MW are paid the 10 cents, despite the fact that 99.9 % of the generation offered was bid at 2.5 cents. While over 93% of generation in Pennsylvania is from low-cost coal and nuclear facilities, higher cost natural gas-fired generation has been setting the margin approximately 25% of the time. Similar pricing mechanisms exist on the capacity pricing model.

“To summarize, we find that utilities that have undergone restructuring display significantly higher price-cost markups than utilities that remained traditionally regulated. The combination of introducing retail competition into an electric utility’s operating territory and divestiture of that utility’s generating assets has increased costs, but has increases prices even more. In particular, we find an average difference of 2 to 3 cents per kWh between prices and costs that is explained by restructuring rather than by increases in fuel prices. We conclude that restructuring has been beneficial to companies that restructured, but the benefits have not reached consumers.” Carnegie Mellon Electricity Industry Working Paper CEIC-08-03, page. 26.

Regaining control over the construction of, and prices charged by, generating plants is the key to regaining control over wholesale electricity prices. Despite the fact that Pennsylvania’s ratepayers paid for the capital costs of the utilities’ power plants, first through depreciation under regulation and then through \$18 billion in stranded cost payments, under the auspices of the Competition Act the plants have been sold by the utilities, often to their unregulated generation affiliates. As a result, we have lost all oversight over the prices paid for power produced by the existing generating plants that were paid for by Pennsylvania ratepayers. Somewhere in this framework, we need to make accommodations for long-term contracts under competitive solicitations with pricing high enough to support the next set of generation facilities, without paying all existing legacy plants the same price that new facilities require for financing and construction.

Although there is no easy or quick solution to the problems created by deregulation, I believe that the best solution available to Pennsylvania is a customer-driven power authority such as that outlined in H.B. 1909. Such an authority would be able to enter into power purchase contracts at prices that are established, not by the wholesale market, but through a series of competitively

bid RFPs for power from new (and existing) generating units. HB 1909 would allow *real* competition among private developers to set the prices that Pennsylvania's customers, both residential and business, pay for power. A state power authority would provide for new generating plants that are built to supply power to consumers at contractual rates that bear a reasonable relationship to the actual cost of producing power. This would be done through a series of competitive solicitations (RFPs) for the construction of new power plants that would provide power at contract-based prices, rather than prices that are the product of the PJM market. Under this approach, all development, construction, and operating risk would fall on the shoulders of the new plant developers. The Commission's prior experience with waste coal units has proven that independent, competitive generators can supply generation with reliability factors in excess of 90% while assuming all performance-related risks.

In addition to regaining control over rates paid by Pennsylvania customers, construction of new power plants in Pennsylvania could be directed in a manner that would best serve the Commonwealth. Currently, there is no oversight in Pennsylvania over what types of plants are built, where the plants are built, or when the plants are built. New plants could be directed to locations that would reduce transmission bottle necks, decrease the need for new transmission lines and reduce the prices in high-cost PJM zones. Finally, an authority could ensure that our economy is strengthened through the use of Pennsylvania resources. The construction of base load generation, fueled particularly by coal and waste coal, would create jobs in this struggling economy.

Finally, the power authority would be able to execute contracts with existing generation facilities under contracts at rates that bear a reasonable relationship to the cost of producing the power. Such arrangements could be to the benefit of the generating units themselves because they would remove a

level of uncertainty to which a merchant generator currently is exposed. With a longer term contract, some of these generators would be able to finance much needed capital improvements to help the facilities meet environmental and efficiency improvement upgrades.

I am deeply concerned that, without a reasonably priced and stable electricity supply, Pennsylvania is losing its ability to compete and its ability to attract and retain businesses. Recently, a large employer in Penn Power's service area (Signature Aluminum) closed shop due, in part, to a significant increase in power prices. Alcoa, which was forced to close its plant in Frederick Maryland when electric rate caps came off in that state, has testified that uncapped electricity rates in Pennsylvania will impose significantly higher electricity costs on its Lancaster plant compared to those paid by its competitors in other states. Other industrial customers are in the same position. The potential loss of additional manufacturing facilities is a very serious threat to Pennsylvania's economy. After industrial rates for electricity increase by 50% or 100%, these companies will be forced to pay a premium if they choose to remain in Pennsylvania. I do not believe that our manufacturing companies will be able to afford to stay in Pennsylvania indefinitely if nothing is done.

The continued economic well-being of Pennsylvania's generating plants is equally important to Pennsylvania. I have been vocal in my support for keeping costs of generation as low as possible through my opposition to recent Congressional carbon legislation and other collateral attacks on the coal industry. At the same time, the continued economic viability of Pennsylvania's energy-intensive industrial customers, which employ thousands of our residents and compete with facilities in other states and countries, is equally important to the economic health of this Commonwealth. A proper balance needs to be struck so

as to maximize employment opportunities in both the power generation sector and the industrial manufacturing sector.

In conclusion, I commend Chairman Tomlinson, Chairman Boscola and the members of this Committee for your consideration of a power authority as a tool to help Pennsylvania consumers obtain just, reasonable and stable electric rates. Much is at stake. While there is no silver bullet to correct the problems that have been created by deregulation, the sooner we start the sooner we can begin to create some long-term stability in this marketplace. Thank you for the opportunity to testify, and I welcome any questions you may have.