



Retail Rate Comparisons and the Electric Restructuring Debate

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Summary

The last of the multiyear retail price caps established during the heyday of electric industry restructuring will expire over the next several years, creating the prospect of significant price increases as electric rates rise to conform to current costs. The abruptness of post-cap rate increases merely accentuates the fact that electricity has become much more expensive over the past decade, driven largely by sharp increases in fuel prices, and draws particular scrutiny to the competitive model introduced through electric restructuring. While many industry critics remain committed to advancing the current restructured model to better achieve the goals of improved wholesale competition, more efficient investment and risk allocation, and continued innovation; a more extreme faction argues that restructuring has failed and should be rolled back, to be replaced by regulatory methods of the past.

To justify a call for radical changes to the competitive model in electricity, one of the most vocal critics of restructuring, the American Public Power Association (APPA), has repeatedly publicized comparisons of state retail rates, purporting to show that restructuring has caused electric rates to increase more in states that restructured than in those that did not. In fact, the comparisons do no such thing. Numerous flaws in the APPA comparison render it useless for drawing conclusions about any alleged deficiencies of electric restructuring. Like many simplistic comparisons, the APPA approach seems straightforward but is not, because many factors completely unrelated to the presence or absence of restructuring affect the level of retail electric rates. The APPA comparison ignores these factors and makes the further error of categorizing states such as Ohio and Pennsylvania as “regulated,” even though they pursued restructuring and still impose retail rate caps. Moreover, some factors that affect retail rates, such as the extension of benefits resulting from restructuring and centralized competitive markets into “regulated” areas, cannot be quantified. Even if the substantial errors in the APPA comparison were corrected, the result would still be meaningless for evaluating the relative merits of restructuring versus traditional utility regulation. Yet APPA continues to advance such flawed and misleading rate comparisons as the centerpiece of its claims that restructuring has failed.

The flawed APPA example

APPA, once a supporter of restructuring but now an ardent opponent, has publicized a number of comparisons of retail electricity rates between “deregulated” states (i.e., states that restructured their electric industry) and “regulated” states (i.e., those where utilities continue to operate under traditional monopoly regulation).² The

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¹ This briefing paper draws on material from two previous papers: C. Cain and J. Lesser, “The Pennsylvania Restructuring Act: Economic Benefits and Regional Comparisons,” February 2007; and, D. DeRamus, “Response to Marilyn Showalter: ‘A Billion Here. A Billion There. Price Matters,’” September 2007.

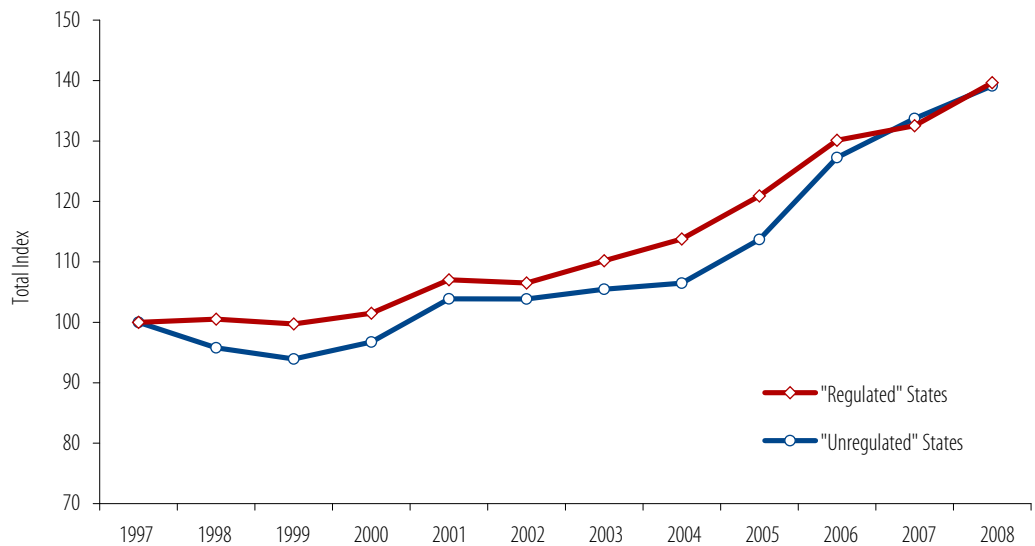
² Critics of restructuring have tended to use the term “deregulated” to refer to states that restructured and “regulated” to refer to states that did not. We generally adhere to the more precise “restructured” and “unrestructured,” but in discussing the work of others, we also use the alternative terms.

most recent APPA-sponsored comparison was described in a recent *Energy Law Journal* article written by APPA staff.^{3,4} This comparison used retail sales and revenue data from the Energy Information Administration (EIA) to calculate average rates for the “regulated” and “deregulated” states. The accompanying chart indicates (1) that in 1997 (before restructuring was implemented in any state except California), rates in the “deregulated” group were significantly higher than those in the “regulated” group, and (2) that in 2007, the rates were higher still.

One of the basic errors in the APPA comparison is that Ohio and Pennsylvania are categorized as “regulated,” even though both states have pursued restructuring and continue to impose rate caps on most retail load. The short-term benefits customers have enjoyed from rate caps that are generally far below current costs result from the utility settlements that spawned restructuring. It is absurd to ascribe such benefits to traditional regulation. In truth, these two states should be excluded entirely from any retail rate comparison, because the effect of the continuing below-cost rate caps cannot legitimately be credited to either restructuring or continued traditional regulation.

We updated the APPA comparison by incorporating data through July 2008, while excluding Ohio, Pennsylvania and Virginia from the analysis.⁵ Figure 1 shows the results for the “regulated” and “deregulated” states presented in index form to highlight the percentage change in retail rates over time. Significantly, retail rates in “regulated” states have in fact risen faster than rates in “deregulated” states between 1997 and 2008.

Figure 1: Relative Change in Retail Rates, 1997–2008 (1997=100)



Source: EIA data; 2008 through July.

Notably, the authors of the APPA article object to comparisons of percentage change, as they are presumably aware that it would tell a different story. They attempt to justify their stance with the nonsensical statement that “[p]ercentage increases, however, mask the fact that the restructured states began with higher rates; they

3 Susan Kelly and Elise Caplan, “Time for a Day 1.5 Market: A Proposal to Reform RTO-Run Centralized Wholesale Markets,” *Energy Law Journal* 29, no. 2 (2008): 491–546 [hereinafter the APPA article].

4 The analysis was initially presented in, “APPA, Retail Electric Rates in Deregulated and Regulated States: A Ten Year Comparison” (2008).

5 Virginia started and then suspended restructuring. Rate caps have remained in effect and will end on December 31, 2008. Virginia is therefore excluded from the analysis for the same reason as Ohio and Pennsylvania are.

undertook the restructuring experiment in the hopes of obtaining lower rates, a result that has clearly eluded them.⁶ Yet, it is the very fact that large rate differentials existed prior to restructuring that makes it critical to examine percentage changes over time when comparing retail rates. Because, prior to restructuring, electric rates in every state were the result of traditional utility regulation, any preexisting rate differentials were caused by other factors. Most, if not all, of these factors are still relevant today. Some states, such as those in the Pacific Northwest, benefited from federal hydroelectric power sold under preference power statutes. Other states, including many in the Midwest, have been able to exploit cheap and plentiful supplies of coal. Restructuring could not overturn such fundamental cost advantages, so it is necessary to look at percentage changes in retail rates over time to draw any conclusions about the impact of restructuring relative to continued regulation.

The nonsensical APPA quote ignores the reality that electric restructuring was never intended to guarantee either absolute price declines (outside of the mandated rate rollbacks in some states) or electricity prices that would fall continuously over time. No market, competitive or regulated, can provide such guarantees. Ultimately, electricity prices, like the prices of all other goods and services, must reflect actual costs rather than legislative fiat. If this were not true, it would be a simple matter to mandate free electricity for all. Electric rates have risen sharply in the last 10 years in both restructured and unstructured states because the cost of producing and delivering power has increased. The fundamental drivers of price differences are still present, however, and must be reflected in any comparison of retail rates.

Fundamental cost variations

Clearly, states with high electric rates had greater economic incentives to pursue restructuring and to do so early. Conversely, states with relatively low rates had less motivation to pursue restructuring at all, and lower-cost states that had initiated plans to restructure were the first to pull back from those plans in the aftermath of the California energy crisis. This “self-selection” explains why there were initially significant rate differences. An examination of the root causes of such rate differences also provides important context for why such rate differentials persist.

Differences in generation fuel mix have a large impact on electricity rates in different states. Some states are more exposed to increases in natural gas and oil prices because of their greater reliance on such fuels to generate power. Not only were such states more likely to pursue restructuring in the first place, they have continued to be relatively exposed to recent sharp increases in fuel prices. In contrast, many “regulated” states have relatively large portions of their generation supply coming from coal, nuclear, and hydro; and electricity prices have consequently been somewhat shielded from fuel price increases (although coal and uranium prices have also risen significantly in recent years). Any comparison of state electricity rates that does not account for the relative impact of generation fuel mix will produce misleading results. Thus, comparing “restructured” Massachusetts, where 50% of electric supply is generated from natural gas and the average retail rate is about 17¢/kWh, to “unrestructured” Idaho, where 80% of supply is from hydroelectric plants and the average retail rate is 6¢/kWh, says nothing about the relative benefits or deficiencies of the “regulated” or “unregulated” paradigms. At most, all this indicates is that fully depreciated hydroelectric dams provide cheap electricity. Electricity rates in Idaho and Massachusetts will differ dramatically over time, but the differences will be completely unrelated to restructuring.

Other causes of electricity rate differences exist besides generation mix, including, for example, prevailing wages, taxes, and the regulatory climate (see Box 1). Another fundamental flaw in the APPA comparison is that it fails to control for these critical differences, making any conclusions drawn from its comparison highly suspect.

⁶ *Supra*, note 3, at 523.

Box 1: North versus South

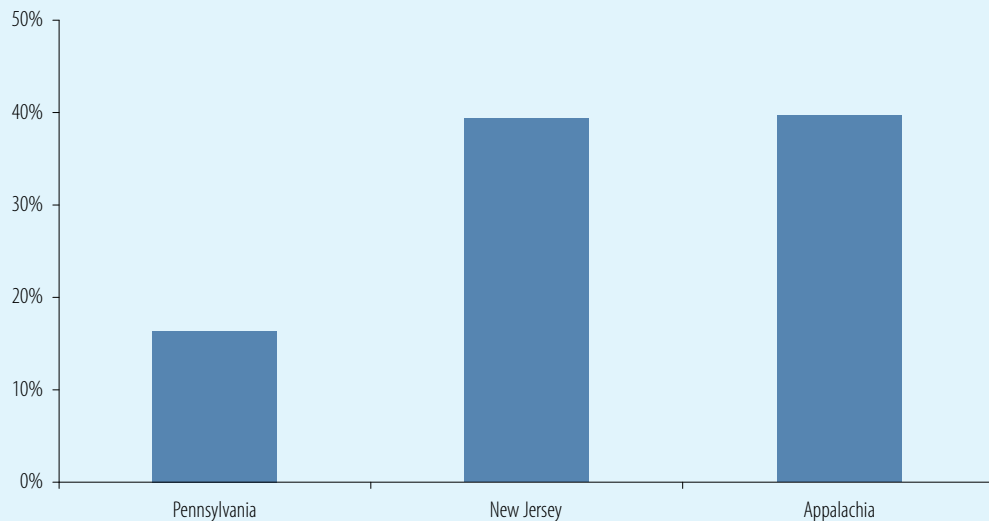
We examined a number of cost drivers in restructured Pennsylvania compared to three unstructured states that are often identified as “low cost” states (here called collectively Appalachia): West Virginia, Kentucky, and Tennessee.

In 2004, overall average wages in Pennsylvania were 17% higher than in Appalachia.¹ The difference for utility industry construction wages is even greater; the average in Pennsylvania exceeds that for Appalachia by 35%. The composite cost of living index tells a similar story to that of wages. The aggregate cost of living index for 2006 was 11% higher for Pennsylvania than for Appalachia.² The tax burden is also substantially higher in Pennsylvania. A comprehensive measure of the burden associated with supporting state and local governments is “own source revenue,” which consists of taxes, fees, and assessments (excluding transfers from other government agencies). While the average burden for Appalachia in 2002 was 85% of the U.S. national average, the burden for Pennsylvania was 97% of the U.S. average; this is a 12% premium relative to Appalachia.³

Retail rate differences

The relatively higher costs in Pennsylvania suggest that, even if all else were equal with respect to power supply in Pennsylvania versus Appalachia, we should expect a significant difference in electric rates based solely on the differences in overall regional costs. Of course, all else is not equal, and, as noted above, the multiyear rate caps still in effect for most Pennsylvania retail load make direct rate comparisons meaningless. Nonetheless, it is possible to develop some interesting context for a retail rate comparison by considering New Jersey rates as a proxy for uncapped Pennsylvania rates. Retail rates in New Jersey have been established through competitive supply procurement since 2002.

Figure 2: Percentage change in retail rates, 1997–2008 (2008 through July)



1 Wage data are from the Bureau of Labor Statistics.

2 The American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index, 2006.

3 Note that own source revenue includes property taxes. There is thus a correspondence with the cost of living index, which includes estimated mortgage costs.

What is most interesting is that the increase in retail rates for Appalachia was actually slightly higher than in New Jersey over the period (40% compared to 39%). Pennsylvania rates were, of course, limited by rate caps and would have been significantly higher in their absence, but it is worth noting again that the enormous dollar benefits that Pennsylvania retail electricity customers have enjoyed from retail rate caps are a direct result of the settlement agreements that established restructuring in the state. This is a legitimate benefit of restructuring that consumers have already banked.

It is also important to acknowledge that the so-called “deregulated” states are not free of regulatory mandates that affect electricity rates. A notorious instance of this is over-priced power supply contracts that were imposed on utilities by state regulators under the Public Utility Regulatory Policies Act of 1978 (PURPA). Those contracts continue to impose a burden on consumers in some “deregulated” states. (See Box 2.)

Box 2: PURPA Contracts

PURPA aimed to promote generation by independent power producers (IPPs) by designating certain plants as Qualifying Facilities (QFs) and requiring utilities to buy power from these plants under long-term contracts at rates projected into the future. Not only did such arrangements shift financial risk to the utility and its customers, but the extended commitments, some as long as 30 years, increased the likelihood that a utility’s actual avoided costs would be substantially different from the projections used to establish the contract rates. In the mid-1980s, long-run projections assumed crude oil prices around \$100/bbl by the year 2000, borrowing costs of 10% or more per year, and large natural gas price increases. Perhaps \$100/bbl doesn’t seem fantastic anymore, but that price wasn’t reached until the current year (2008)—and prices have subsequently retreated to below \$50/bbl. In 1983, EIA projected that crude oil would be \$101.59/bbl in 1995; the actual price in 1995 was only \$17.14.

The impact of such overpriced PURPA contracts is still being reflected in customer rates. Two examples, for states that have a significant impact on the calculation of average retail rates for “deregulated” states, are the following:

- In Maryland, Allegheny Power sells power from its Warrior Run QF contract into the wholesale market to offset customer rate increases associated with the 30-year contract.¹ In its December 7, 2007, filing to determine the Warrior Run rate surcharge for 2008, Allegheny Power estimated total Warrior Run costs of more than \$111 million for 2008 and revenue of only \$71 million from sales into the PJM markets. Despite significant increases in wholesale electricity prices, driven by rising fuel costs, the Warrior Run QF was still expected to be priced more than 50% above the market, and Maryland consumers are obligated to pick up the difference.
- In New Jersey, the Board of Public Utilities estimated that the cost to New Jersey utilities of long-term non-utility generator (NUG) contracts exceeded the market value of the power by \$3.5–\$5.3 billion.^{2,3}

1 In The Matter Of The Potomac Edison Company’s Proposed: A) Stranded Cost Quantification Mechanism; B) Price Protection Mechanism; And C) Unbundled Rates, MDPSC Case No. 8797, Settlement Agreement, September 23, 1999. (Note that the Potomac Edison Company does business as Allegheny Power in Maryland).

2 New Jersey Division of the Ratepayer Advocate, “Position Paper on Above-Market Non-Utility Generation Power Purchase Agreements,” February 1998. <http://www.rpa.state.nj.us/nug.htm> at 1. (accessed November 10, 2008).

3 Contracts identified as NUG or IPP may or may not be with QFs *per se*, but were often similarly imposed on utilities by regulators.

Rate levels and changes over time are driven by a number of factors that are not at all related to restructuring or continued traditional regulation. The question should be asked of those who claim that restructuring has failed and who advocate radical changes to the competitive model in electricity, how these oft-repeated rate comparisons can possibly be used to support their case. There is no reliable evidence that restructuring has caused electricity rates to be higher than they would have been under continued old-style regulation, and there is much evidence that restructuring has produced significant benefits.⁷

Regulatory lag

Still another significant flaw in the APPA article’s retail rate comparison is that it does not account for the fact that rates in “regulated” states often lag actual costs. During periods of rapidly rising generation costs, utilities must often file for rate increases that cover not only current costs but also expenditures made in prior periods that are not yet collected from ratepayers. This “regulatory lag” means that in a rising-cost environment, regulated rates will tend to be understated. In restructured states, retail rates tend to track market prices more closely, and there is consequently less rate lag. Moreover, there is no mechanism in restructured states for generators to recover higher-than-expected costs after the fact. This is a key benefit of restructuring that gets little attention.

Regulatory lag significantly affects the results of simple rate comparisons. For example, in response to the sharp rise in natural gas prices through mid-2008, Progress Energy (PE), Florida Power & Light (FPL), and Florida Public Utilities Company (FPUC) all filed for midyear rate increases with the Florida Public Utilities Commission. FPL was allowed a rate increase for August to December 2008 that increased residential rates by about 8%. Even so, the utility estimated it would still be left with \$300 million in unrecovered costs at the end of the year.⁸ Rate increases subsequently approved for 2009 include recovery of costs incurred by the utilities in 2007 and 2008.⁹ The residential rate increases approved for 2009 are shown in Table 1.

Table 1: Florida Residential Rate Increases 2008–2009 (Based on monthly use of 1,000 kWh)

Utility	Jan 2008 Rate for 1000kWh (¢/kWh)	Jan 2009 Rate for 1000kWh (¢/kWh)	Percent change
FPL	10.2	11.0	7%
PE	10.8	13.8	28%
TECO	11.4	12.8	12%
Gulf Power	10.2	12.4	22%
FPUC ¹⁰	9.9	13.0	30%

Source: Florida Public Service Commission

7 See for instance: J. Bushnell 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; N. Rose, K. Markiewicz, 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, 04-418 WP, November 2004, <http://web.mit.edu/ceepr/www/2004-018.pdf>; Global Energy Decisions, LLC, “Putting Competitive Power Markets to the Test,” July 2005, <http://www.globalenergy.com/BRO5/BRO5-competitive-power-study.pdf>; P. Joskow, “Markets for Power in the United States: An Interim Assessment,” *The Energy Journal*, January 2006, http://econ-www.mit.edu/faculty/download_pdf.php?id=1219

8 Florida Power & Light, “PSC approves FPL mid-year fuel adjustment,” news release, July 1, 2008. The residential rate impact is estimated for customers using 1,000 kWh per month.

9 Florida Public Service Commission, “Fuel charges set for electric utilities,” news release, November 12, 2008.

10 Simple average of rates approved for FPUC Marianna and FPUC Fernandina.

A number of other regulated states will also have substantial year-on-year rate increases for 2009. These increases will reflect both higher current/projected costs and carryovers of prior-year costs.¹¹ Although accounting for regulatory lag in retail rate comparisons can be difficult, not doing so, particularly when costs are rising, means that such comparisons will be meaningless for judging the relative merits of restructuring versus continued traditional regulation. What is relevant, however, is that regulated utilities can recover unexpected costs from customers after the fact. In contrast, suppliers in restructured states that experience higher costs than were reflected in associated retail prices bear those costs themselves; they cannot pass along unexpected cost increases to consumers via regulatory fiat. That substantial benefit of restructuring will become more evident in average retail rates over longer periods.

Finally, pending and potential future environmental costs will likely weigh disproportionately on “regulated” states that are currently benefiting from greater dependence on coal generation. States that are highly dependent on coal-fired generation face considerable future cost increases related to the need for pollution control technology and other potential emissions-related costs related to carbon control requirements, emissions allowances, or a carbon tax. Thus, the same retail comparisons performed a few years hence will likely be considerably different but just as uninformative.

How “unrestructured” states have benefited from restructuring

Yet another issue that is ignored in comparisons of electric rates in restructured and unrestructured states is the fact that the unrestructured states, i.e., those in which the utilities still operate under traditional monopoly regulation, have in fact benefited substantially from circumstances that would not exist were it not for restructuring and wholesale competition elsewhere. For example, the considerable volume of excess generation that exists in the Southeast is attributable almost exclusively to independent generation capacity built in anticipation of state restructuring and expanded market access that never occurred. Incumbent, vertically integrated utilities have exploited these independent power plants by buying cheap peak power on a short-term basis and, in a number of cases, by buying independently owned power plants outright at fire-sale prices when those plants suffered financial distress because of lack of market access and high natural gas prices.

Utility customers in the Southeast and in other unrestructured states have also benefited generally from the development of vigorous wholesale competition and improved plant performance promoted by restructuring and centralized markets elsewhere. Regulators, customers, and utility investors have reference to competitive performance benchmarks and can apply pressure for comparable performance from the traditionally regulated utilities. Thus, even if we disregard important questions about the comparability of electricity supplies in restructured and unrestructured states and differences in other cost drivers, a comparison of retail rates provides little evidence about the relative merits of restructuring versus traditional utility regulation, because it is not possible to isolate “unrestructured” states from the benefits of restructuring.

¹¹ The list of regulated states where rate increases have been approved or requested to begin midyear 2008 or in 2009 is extensive and includes Tennessee (TVA announced a 20% increase in wholesale power rates as of October 1, 2008, on top of a 7% increase that took effect April 1, 2008), Alabama, Colorado, Georgia, Kansas, Michigan, Minnesota, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, and Washington.

Conclusions

Electric restructuring has provided substantial benefits both up front, in the form of multiyear rate caps, and ongoing, through the expansion of wholesale markets, incentives for efficient investment and plant operation, and shifting risks associated with plant construction and performance away from consumers. Yet some increasingly vocal critics, such as the APPA, advocate a radical change in course that would eliminate the main elements of restructured power markets and reimpose regulatory methods of the past. To justify their claim that restructuring has failed, the APPA and others have advanced retail rate comparisons that purport to show that restructuring has caused rates to rise. Yet such rate comparisons ignore the myriad fundamental drivers of electric rates and ignore the fact that so-called “regulated” states have benefitted significantly from the pursuit of restructuring elsewhere. Such comparisons are therefore useless for evaluating the relative merits of restructuring versus traditional utility regulation.

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