

# The Failure of Electricity Deregulation: History, Status and Needed Reforms

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For the last 10 years, the Federal Energy Regulatory Commission (FERC) has embarked on an experiment of electricity deregulation, replacing 100 years of cost-of-service regulated rates with prices in many parts of the country now set by market-based prices, thereby treating an essential service—electricity—as a commodity. Deregulation meant breaking up vertically-integrated companies and allowing newly deregulated power plants to sell power at the highest price they can charge, compared to the original model where prices were directly tied to costs, plus a reasonable, regulated profit. As a result, prices in deregulated states are higher and are climbing faster than in those states that remain regulated, as wholesale competition has failed to materialize.

Consumers were sold deregulation after being assured that they would be able to “choose” their electricity supplier, as though electricity is like any other product (economists call this *gratuitous differentiation*, marketing an age-old commodity in superficial ways to create a false distinction in the product). The reality is that 92 percent of households in “retail choice” states have no ability to “choose” an alternative supplier because the retail market has suffocated under an uncompetitive wholesale market. And many of those eight percent of consumers that do “choose” an alternative supplier are actually getting their power from an unregulated retail affiliate of the old distributional utility.

While states are increasingly reluctant to support deregulation because of skyrocketing prices in deregulated markets, the federal government continues its aggressive push for market-based rates. In addition to raising prices, this move towards market-based rates has stripped states of their traditional roles, thereby concentrating more authority in the hands of the FERC, which has shown little interest in protecting the rights of consumers.

The crux of the problem lies with FERC's failure to regulate wholesale markets by refusing to review rates charged by power sellers. FERC allows power marketers and other suppliers to charge *market-based rates* without any regular review to ensure that such rates comply with the Federal Power Act's mandate that all rates be “just and reasonable”. FERC believes that the forces of “competition” automatically produce just and reasonable rates. But because wholesale markets are not adequately competitive, power sellers are free to price-gouge consumers under FERC's plan. FERC has ignored pleas from states, including the states of Connecticut, Illinois and Montana, to address clear evidence of price-gouging by power sellers.

## **Background**

Electricity was traditionally supplied by regional monopolies that owned both the power plants and the transmission lines for the distribution of power. In exchange for allowing corporations to have a monopoly over electricity customers, states heavily regulated these companies, setting the rate of return of profit for the utilities based on the *cost of service*, and planned for future power needs. Although this system was often abused because of the enormous political power of the electric utilities and their ability to influence state policymakers, it was regarded as the most reliable and affordable electric system in the world.

The term deregulation refers to the breaking up of these monopolies at the state level, where the utilities' power plants were either sold to a third party or, more controversially, simply transferred to an unregulated affiliate of the utility (such as the case with Constellation Energy in Maryland and Exelon in Illinois).

Deregulation was triggered by a series of federal actions over several years, followed by decisions by America's largest states to pass laws ordering the separation of power plants from the distributional utility.

As soon as utilities break up their monopolies by selling their power plants, states cede regulatory authority over the electricity produced by those plants. Under Supreme Court interpretations of the 1935 Federal Power Act, states can regulate only the retail sale of electricity to *end consumers* (courts have ruled that wholesale sales of power are too fluid for individual states to handle, therefore classifying it as interstate sales subject to federal jurisdiction). Under regulation, the utilities generated electricity at their own plants, delivered that electricity over their own wires, and sold the product to end consumers. Regulating the retail price meant that states were, by extension, regulating the wholesale market, too, because the same company controlled both the wholesale and retail markets. But when states ordered the breakup of utility monopolies, many state lawmakers did not understand that they were severing their ability to regulate wholesale prices.

The federal government played an early, unintended role in encouraging deregulation. In response to the energy crisis of the 1970s, Congress passed the Public Utility Regulatory Policy Act (PURPA) in 1978. PURPA's purpose was to wean America off foreign oil by encouraging alternative fuels for generating electricity. PURPA required utilities to buy power from independent power producers (mostly small generators, or ones using renewable energy sources) at a price approved by regulators. To achieve PURPA's objective of encouraging alternative energy supplies, regulators in many states approved high prices for long-term PURPA contracts, which were passed on to consumers in the form of higher rates.

At the same time, many utilities were building or just bringing on-line nuclear power plants. These reactors experienced tremendous cost overruns due to significant construction costs, expensive compliance with safety regulations, and significant waste disposal expenses.

The Energy Policy Act of 1992 (EPACT) started to chip away at utilities' monopolies by expanding FERC authority to order utilities to allow independent power producers equal access to the utilities' transmission grid. Enron lobbied heavily in favor of this legislation because the company believed that by forcing utilities to open their transmission lines to independent power producers, the resulting competition would deliver lower prices for consumers. Together, PURPA and EPACT provided the first cracks in America's system of cost-of-service regulation and towards a market-based approach.

By the mid-1990s, large industrial consumers sought to escape the high costs of power in some parts of the country, such as California, that came as a result of building expensive nuclear power plants. At the same time, independent power producers such as Enron were actively lobbying to be able to sell power to these big consumers. Political pressure for deregulation mounted because the breakup of the utility industry meant huge amounts of money could be made by newly deregulated companies. No doubt, too, the meteoric rise of the dot.com industry in the early- and mid-1990s put pressure on the energy industry to increase their rates of return.

### **FERC Order 888: Impact on Deregulation and Reliability**

The federal government became more involved in 1996. Seeking to further compromise the utilities' monopoly, FERC issued Order 888, which was even more aggressive in its requirement that utilities open their transmission to independent producers. FERC's intent was to introduce competition at the wholesale level and to keep utilities from using their control of the transmission system to limit the entry of lower priced generation. But the primary result was to force many states to deregulate, or else their regulated monopolies would get priced out by utilities operating in other states who had access to the transmission lines.

Order 888 opened the door to independent power generators, which overwhelmed most states' ability to manage supply. This inability to plan for and manage supply prompted many states, including California, to fully deregulate their wholesale markets. In the three years following Order 888, 24 states had passed legislation requiring utilities to divest their generation (although by 2001, in response to fears after the California energy crisis, eight states—Arizona, Arkansas, Montana, Nevada, New Mexico, Oklahoma, Oregon and West Virginia—repealed or significantly delayed their deregulation laws).

The separation of power plants from transmission mandated by Order 888 had a radical impact on eroding reliability, and played a direct role in America's power blackout on August 14, 2003. Reliable planning and operation of a bulk supply system requires full coordination between generation and transmission and this functional separation made coordination much more difficult:

*By separating generation from transmission, reliability planning decisions no longer are made by a relatively small number of non-competing organizations; today, decisions are made by a large number of entities, most of which are competitors and each of which has more interest in profit than in power system*

*reliability. Procedural rules established between and among the various parties are no longer matters of overall corporate policy, but rather of contractual arrangements based on the parties' financial self-interest...In many companies system planning departments were split up or disbanded. In the United States, reductions in personnel have been greater in the deregulated portions of the industry than in those still under regulation... New market areas were established that were inconsistent with the boundaries of responsible operating entities and/or the regional councils responsible for reliability standards and enforcement... On the day of the August 14, 2003 blackout, MISO [the Midwest Independent System Operator] had neither the authority nor technical means to operate a generation and transmission grid in the region. Since formal spot-markets had not been established, a large number of bilateral contract trades originated with deregulated power plants, complicating system operations. These deregulated power plants had little incentive to provide needed reactive power on the day of the blackout.<sup>1</sup>*

Deregulating markets also meant that power marketers now had incentive to sell power not in the local market near power plants, but to the highest bidder. As a result, the transmission grid—which was designed to accommodate the needs of local monopolies—is now being used for the freewheeling trading of electricity and movement of power over longer distances. Sending power over a much wider area strains a transmission system designed to serve local utilities.

In December 1999, FERC issued Order 2000 calling for the creation of regional transmission organizations (RTOs), entities to replace state control and operation of the transmission grid. Several regional grids have now been established (such as the nation's largest, PJM), and they are now the defining structures separating regulated states from deregulated ones. These RTOs, which are not part of government and are run by board of directors that are not elected and therefore unaccountable to consumers, have replaced states as the jurisdictional entities controlling transmission. FERC has delegated key responsibilities to these non-governmental organizations, including leaving them in charge of monitoring markets for Enron-style manipulation and making decisions about whether rates charged by power companies are just and reasonable. And these RTOs are not neutral arbiters, as they actively lobby to promote deregulation. PJM spends \$280,000 a year lobbying the federal government,<sup>2</sup> and three-quarters of nearly \$15,000 in campaign contributions by PJM executives went to Republicans.<sup>3</sup> ISO New England spent \$160,000 lobbying Congress and FERC in 2006, and the Midwest ISO spent at least \$100,000.<sup>4</sup>

In addition to acting as advocates, rather than umpires, of deregulation, RTOs are passing enormous costs on to consumers. In 2005, 85 percent of the \$815 million passed from

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<sup>1</sup> Jack Casazza, Frank Delea, and George Loehr, *Contributions of the Restructuring of the Electric Power Industry to the August 14, 2003 Blackout*, [www.energetics.com/meetings/reliability/pdfs/casazza.pdf](http://www.energetics.com/meetings/reliability/pdfs/casazza.pdf)

<sup>2</sup> [http://sopr.senate.gov/cgi-win/opr\\_gifviewer.exe?/2006/01/000/202/000202134|2](http://sopr.senate.gov/cgi-win/opr_gifviewer.exe?/2006/01/000/202/000202134|2)

<sup>3</sup> [www.fec.gov/finance/disclosure/advindsea.shtml](http://www.fec.gov/finance/disclosure/advindsea.shtml)

<sup>4</sup> <http://sopr.senate.gov/>

ISO New England, Midwest ISO, New York ISO and PJM to market participants were administrative, rather than operational, costs.<sup>5</sup>

In August 2005, President Bush signed into law the Energy Policy Act of 2005, repealing the Public Utility Holding Company Act of 1935. This law, among other things, had limited the ability of utilities to merge and placed restrictions on the ownership of utilities by investment banks, petroleum companies and other non-utility entities. As a direct result of the repeal of this law, a wave of mergers and consolidation has hit the U.S. utility industry, further complicating the lack of adequate competition in wholesale power markets.

### **Current Status of Deregulation**

By 2000, 24 states had passed laws ordering or allowing their monopoly utilities to sell their power plants to other companies or transfer them to their own unregulated affiliates. But six years later, eight states had repealed or delayed their deregulation laws in response to the California energy crisis of 2000-01 and other problems associated with deregulation. Four additional states, while ordering utilities to divest power plants, still retain retail price controls; as a result, most households in these four states are not yet exposed to the higher prices found in the deregulated wholesale market. That leaves only 12 U.S. states that have implemented full electric deregulation: California, Connecticut, Delaware, Massachusetts, Maryland, Maine, Michigan, New Hampshire, New Jersey, New York, Rhode Island and Texas. Forty percent of the American population lives in these 12 states.

Since the end of the California energy crisis, the disparity of prices charged to consumers between those states that continue pushing ahead with deregulation and those that have not is startling. The 12 states that removed rate caps for household consumers—thereby pegging prices to wholesale deregulated markets—have experienced average annual growth of 7.3 percent since 2002. The 38 states that still regulate their rates have seen average annual growth of prices grow only 4.2 percent since 2002. As a result, the average price in the 12 deregulated states is 13.4 cents per kilowatt hour, 48% higher than the average price of 9.1 cents in the 38 regulated states.

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<sup>5</sup> *Analysis of Operational and Administrative Costs of RTOs*, American Public Power Association, February 2007, [www.appanet.org/files/PDFs/AnalysisCostofRTOs020507GDS.pdf](http://www.appanet.org/files/PDFs/AnalysisCostofRTOs020507GDS.pdf)

**Average Retail Price of Electricity in Rate-Regulated States and Deregulated States Without Rate Caps (cents/kWh)**

<b>Residential Customers</b>	2002	2003	2004	2005	2006	Average Annual Growth from 2002
38 Rate-Regulated States	7.7	7.9	8.1	8.4	9.1	+4.2%
12 Deregulated States Without Rate Caps in 2006	10.1	10.6	10.9	11.7	13.4	+7.3%
Difference between rate-regulated and deregulated states	+32%	+35%	+34%	+39%	+48%	

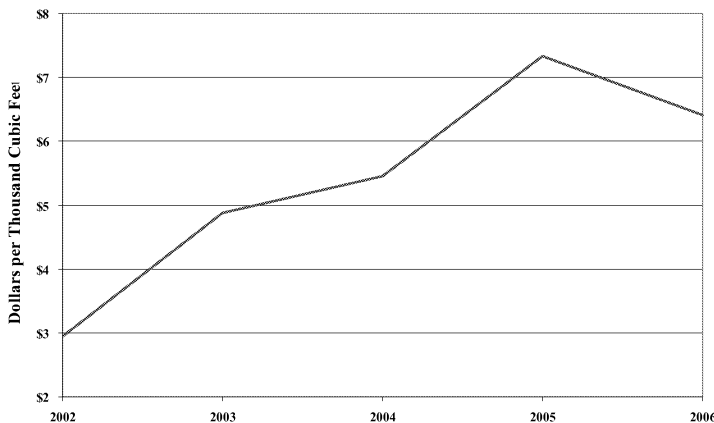
Note: The 12 deregulated states are CA, CT, DE, MA, MD, ME, MI, NH, NJ, NY, RI and TX. Deregulated IL, OH, PA, and VA are included with regulated states due to existing price caps.

Source: Calculations based on U.S. Energy Information Administration data [www.eia.doe.gov/cneaf/electricity/page/sales\\_revenue.xls](http://www.eia.doe.gov/cneaf/electricity/page/sales_revenue.xls)

**Discrepancies Between Power Plant Fuels Raise Prices to Consumers**

Why are prices rising faster in deregulated states compared to regulated ones? America’s deregulated markets are structured using *Locational Marginal Pricing*, in which the price bid by the generator supplying the last megawatt of power to meet demand sets the price paid to all generators in the market. This clearing price is often set by natural gas “peaker” power plants, which are more expensive to operate than baseload generators like coal and nuclear. As a result, rates set in deregulated wholesale markets are based on the highest cost generator.

U.S. Natural Gas Wellhead Price



Contrast this model with the regulated one, in which rates reflect the *average* costs of all generators necessary to meet demand.

In just the last few years, after the deregulation craze in which two dozen states and FERC embarked upon an untested theory of electric utility deregulation, market prices for natural gas have skyrocketed. Because natural gas plays a major role in

setting the market price of electricity, companies with generation assets fueled by anything but natural gas are able to sell their power at natural gas prices, which far exceeds the cost to produce power from their non-natural gas sources. As a result, owners of non-natural gas facilities are reaping windfall profits, even though these nuclear, coal and hydro facilities are decades old and were initially paid for by ratepayers.

Indeed, the Bush Administration concludes that “customers in states with competitive retail markets for electricity see the effects of natural gas prices in their electricity bills more rapidly than those in regulated states, because their prices are determined to a greater extent by the marginal cost of energy—the average operating cost of the last, most expensive unit run each hour—rather than the average of all plant costs. Natural gas plants, with their higher operating costs, often set the hourly marginal price.”<sup>6</sup>

In 2006, an owner of a power plant in PJM with a marginal cost of \$30 per installed MW-year earned \$171,735 per installed MW-year in net revenue from the Energy Market alone (which does not include additional payments for reactive power and other reliability incentives)—a 187 percent increase from the \$59,776 per installed MW-year in net revenue that same facility earned in 2000.<sup>7</sup>

### **Revolving Door Competition**

Goldman Sachs, Constellation Energy, Exelon, Mirant, PSEG and Reliant Energy have formed the Compete Coalition, which has spent \$1.8 million since 2005 lobbying the federal government to promote deregulation. Collectively, the companies have paid over \$1.83 billion to settle allegations of market manipulation. Compete has hired a bi-partisan group of lobbyists from three firms that includes recently retired powerful government officials who will do the bulk of the organizing for the new coalition:

- William Massey, Democrat, commissioner for the Federal Energy Regulatory Commission from 1993-2004 and now a lobbyist with Covington & Burling.
- Don Nickles, a former Oklahoma GOP senator from Oklahoma, now the founding partner of the lobbying firm the Nickles Group.
- Robert Walker, former Pennsylvania GOP representative from 1976 to 1996 and a founder of the lobbying firm Wexler & Walker.
- Jack Howard, former deputy assistant for legislative affairs to President George W. Bush and a former senior aide to House Speakers Dennis Hastert, Newt Gingrich and former Senate Majority Leader Trent Lott. Howard now is president of the Wexler & Walker lobbying firm.
- Joel Malina, Democrat, a lobbyist with Wexler & Walker.

Rising natural gas prices vastly increase the marginal costs of power plants fueled by natural gas relative to competing fuels like coal. In 2005, the average cost for a coal power plant was \$1.54 per 10<sup>6</sup> Btu, while the average cost for a natural gas power plant was 533% higher, at \$8.21 per 10<sup>6</sup> Btu. As recently as 1999—the year many states passed

<sup>6</sup> *Annual Energy Outlook 2006*, U.S. Energy Information Administration, page 82  
[www.eia.doe.gov/oiaf/archive/aeo06/pdf/trend\\_3.pdf](http://www.eia.doe.gov/oiaf/archive/aeo06/pdf/trend_3.pdf)

<sup>7</sup> *2006 State of the Market Report*, Table 3-1, page 108, [www.pjm.com/markets/market-monitor/som.html](http://www.pjm.com/markets/market-monitor/som.html)

deregulation legislation—the average cost of a natural gas power plant was only \$2.57 per 10<sup>6</sup> Btu (compared to \$1.22 per 10<sup>6</sup> Btu for the average coal plant).<sup>8</sup>

The same is true for nuclear power plants that were built 30 years ago.<sup>9</sup> A recent presentation by the Nuclear Energy Institute<sup>10</sup> boasts of a similar cost gap between nuclear power and natural gas: nuclear power busbar cost averages \$23 per megawatt hour, compared to \$71.40 per megawatt hour for a 7,500 Btu natural gas fired power plant.

As a result, companies owning large fleets of unregulated plants are reaping record profits. A recent study finds

*PJM companies who own capacity which was formerly regulated will produce about \$4.2 billion per year more in profits than would be earned by typical regulated companies. The accumulated returns that investors have realized from expectations of increased earnings and historic returns as manifested in stock price increases and dividend payments is between \$32 and \$40 billion depending on the period used in computing returns. The accumulated market values of PJM companies that had constructed plants with ratepayer support have a premium above their book value that far exceeds the estimated premium for regulated companies. This surplus market to book ratio is between \$32 and \$50 billion.*<sup>11</sup>

A recent filing by AK Steel Corp illustrates this problem of power company profiteering, as the company argued to regulators in a deregulated state warning of

*the economic catastrophe that will strike the Commonwealth [of Pennsylvania], and is already hitting neighboring states, with the onset of market-only power pricing...lower cost energy alternatives to Pennsylvania abound. Kentucky, West Virginia and Indiana offer industries the increasingly valuable option of low, relatively fixed rates, keyed not to volatile natural gas driven prices, but to the costs of running base-load coal-fired units. There, the Commission still exercises its time-honored duty to assure that rates are just and reasonable, and that utilities receive a reasonable, and only a reasonable, rate of return on their generation investments.*<sup>12</sup>

In Maryland, higher electric rates caused an Alcoa smelter to close operations and lay off 600 workers.<sup>13</sup> In Pennsylvania, Allegheny Technologies announced plans to end a \$400 million investment because of that state's rising electricity costs.<sup>14</sup>

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<sup>8</sup> [www.eia.doe.gov/cneaf/electricity/epa/epat4p5.html](http://www.eia.doe.gov/cneaf/electricity/epa/epat4p5.html)

<sup>9</sup> It is important to note that the biggest cost of nuclear power is the capital costs, so building new nuclear plants won't guarantee price advantages because the costs to build new plants are so high.

<sup>10</sup> *Nuclear Energy 2006: A Solid Business Platform for Future Growth*, February 2006, [www.nei.org/documents/Wall\\_Street\\_Briefing\\_2-2-06.pdf](http://www.nei.org/documents/Wall_Street_Briefing_2-2-06.pdf)

<sup>11</sup> Edward Bodmer, "The Electric Honeypot: The Profitability of Deregulated Electric Generation Companies," February 2007, pgs 2-3, [www.appanet.org/files/PDFs/BodmerElectricHoneypot013007%20Final.pdf](http://www.appanet.org/files/PDFs/BodmerElectricHoneypot013007%20Final.pdf)

<sup>12</sup> June 15, 2006 comments of AK Steel Corp. In the Matter of Policies to Mitigate Electric Price Increases, Docket M-00061957, [www.puc.state.pa.us/PcDocs/617128.pdf](http://www.puc.state.pa.us/PcDocs/617128.pdf)

<sup>13</sup> Justin Blum, "Maryland Alcoa Plant to Start Layoffs in December," *The Washington Post*, November 24, 2005.

<sup>14</sup> Kim Leonard, "Regulators to re-examine electricity law," *Pittsburgh Tribune-Review*, December 3, 2006.



### **Complaints by Public Citizen and State Attorneys General**

Over the last year, there have been numerous challenges to FERC's broken deregulation scheme. But FERC has rejected all complaints, even those brought by state government officials. Public Citizen has sued FERC, arguing that the agency's market-based rate program is illegal because it violates the Federal Power Act's mandate that FERC review all rates and that they be "just and reasonable."<sup>15</sup>

#### ***Montana***

In response to the state's 1997 deregulation law, Montana Power—a utility with community roots dating to 1912—sold its 11 hydroelectric and 4 coal power plants to Pennsylvania-based PPL for \$767 million. This sale represented the bulk of all the power plants in the state of Montana. PPL created a subsidiary, PPL Montana, to run the power plants. PPL understood the importance of taking control of Montana's cheap hydro and coal facilities when the company boasted that the acquisition was "expected to provide a significant impact on future results of operations." While the subsidiary PPL Montana represents only 4.6 percent of the total assets of PPL Corp, it produced 19 percent of the company's profit from 2000-03, including 58 percent of PPL's 2001 profit. PPL Montana's cumulative four year profit of \$305 million means the company made \$850 off every Montana household (beginning in 2004, PPL ceased reporting PPL Montana's earnings separately, so continued analysis of the segment's profits is no longer possible).

In May 2006, FERC rejected appeals by Montana state officials who provided evidence that a single company, PPL, dominated the state's power market and therefore should not be allowed to charge market-based rates.<sup>16</sup>

Since then, NorthWestern Energy—which replaced Montana Power as the state's primary supplier of retail electricity and now has been purchased by the Australian investment bank Babcock & Brown—held an auction in January to procure power, and only three companies submitted bids: PPL Montana, Powerex (a subsidiary of BC Hydro) and Wall Street investment bank JP Morgan.

#### ***New England***

FERC agreed with major power producers to implement a Forward Capacity Market in New England, allowing the New England ISO to levy a surcharge on consumers and hand the proceeds to all *existing* generators in the ISO. Under the agreement, New England consumers would be required to pay \$5 billion in transition payments to all existing power plant owners. The theory behind this plan is that some high-cost power plant owners are not earning big enough profits to provide an incentive to build new generation, so FERC wants to guarantee huge profits to power sellers to create an incentive to build more power plants. But the Forward Capacity Market is inefficient because companies are not required to use the proceeds of the surcharge to build new power plants; rather, they are free to spend the windfall profit on anything they see fit. Both the Massachusetts and Connecticut Attorney General charged that this scheme

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<sup>15</sup> *Cinergy v FERC*, Case 04-1168, US Court of Appeals for the District of Columbia Circuit.

<sup>16</sup> Docket ER99-3491, <http://elibrary.ferc.gov/>

violates the Federal Power Act's mandate that all prices be "just and reasonable" and interferes with the rights of states to determine generation capacity adequacy.<sup>17</sup> FERC has rejected the states' requests, and the states have appealed to the United States Court of Appeals for the District of Columbia Circuit.<sup>18</sup>

In September 2005, Connecticut Attorney General Richard Blumenthal (along with the Connecticut Office of Consumer Counsel, the Connecticut Industrial Energy Consumers and the Connecticut Municipal Energy Electric Cooperative) initiated a complaint against FERC's plan to allow the New England ISO to continue to allow Reliability Must Run charges for high-cost generators.<sup>19</sup> Under the plan, low-cost generators such as coal and nuclear continue to charge market-based rates largely set by the price of natural gas, while many high-cost generators opt-in to a system that guarantees them a rate-of-return. The patchwork of regulations ensures that overall market prices will be high while subsidizing the operations of inefficient high-cost generators, and the Connecticut Attorney General estimates costs to Connecticut consumers of \$1 billion in just one year.

### ***Illinois***

A recent complaint filed by the Illinois Attorney General<sup>20</sup> concludes that Exelon, parent company of the state's largest distributional utility, ComEd, was charging households a 260 percent markup over costs in the power auction held in January 2007 to serve consumers for the next several years. Exelon's deregulated power plants won 95 percent of the 41-month contracts and 40 percent of the 29-month contracts.

### ***Maryland***

Maryland was in a similar situation as Illinois, as the largest distributional utility (Baltimore Gas & Electric) is controlled by a large holding company (Constellation Energy) that owns BGE's old power plants throughout the state. In a May 31, 2006 letter that Constellation Energy sent to Maryland State Senator Thomas V. Mike Miller, Jr and Delegate Michael E. Busch, Constellation Energy admits that it won 70 percent of the load obligations in the state's 2006 power auction.<sup>21</sup> Although Constellation Energy won 70 percent of the auction, the company will be "required to acquire energy products associated with...93% of the power needed to serve its BGE residential load obligations in the market at prevailing market rates" because Constellation claims that its fleet of Maryland-based power plants already has its output committed elsewhere. Constellation Energy argues that it is earning a profit margin of 3.1 percent on importing this power. But Constellation Energy fails to say how much it is earning exporting cheap power produced at its Maryland plants, or whether the company is merely "laundering" its energy product sales by selling the output of its Maryland power plants to Constellation Power Source, its power marketer, and then selling that output to its affiliate, BGE. The prices charged by Constellation Energy on the coal, nuclear and hydro power plants formerly controlled by BGE most likely are fetching windfall profits because these

<sup>17</sup> Docket ER03-563, <http://elibrary.ferc.gov/>

<sup>18</sup> *Maine PUC v. FERC*, Case No. 06-1403.

<sup>19</sup> Docket EL05-150, <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10795073>

<sup>20</sup> Submitted to FERC on March 15, 2007 in docket EL07-47  
<http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11291035>

<sup>21</sup> [www.sec.gov/Archives/edgar/data/1004440/000110465906038686/a06-12885\\_1ex99d1.htm](http://www.sec.gov/Archives/edgar/data/1004440/000110465906038686/a06-12885_1ex99d1.htm)

relative low-cost power sources are able to charge extremely high profits in a market where natural gas fired generation sets the price of electricity.

### ***New York***

New York's deregulated market has been beset by market manipulation and Enron-style economic withholding. A recent filing at FERC documents that "the impact on New York State's consumers of economic withholding during the 2006 Capability Year on was approximately \$157 million."<sup>22</sup> In testimony provided by the New York ISO expert witness David B. Patton concluded "that the [Installed Capacity] ICAP Spot Market Auctions during the 2006 Summer Capability Period have been characterized by economic withholding of Capacity to exercise market power," with power generators reducing their output to exactly match new generation brought online by the New York Power Authority.<sup>23</sup>

### ***Texas***

In March, the Texas Public Utilities Commission determined that the largest generator, TXU, had manipulated the Texas market during the summer of 2005, and staff recommended the company pay a \$210 million penalty. The Texas market continues to be plagued by price spikes and high retail prices for consumers.

## **Market Power and Lack of Competition**

Absent these price discrepancies between power plant fuel types, deregulated markets would still be inferior to vertically-integrated ones due to the abundant problems of *market power*. Given the characteristics unique to electricity—high barriers to entry, inelastic demand, inability for storage and transmission constraints—competitive markets have been precluded from forming, as the various inherent constraints found in electricity markets allows for easy exercise of market power by generators.

There are two main methods of market power. One is *capacity withholding*, where a power plant owner intentionally shuts down one power plant or otherwise reduces generating capacity in order to raise prices at other power plants they control in the region. The generator is able to make more money from their operating power plants than if their shut-down power plant were still operating, thereby making more money selling less power. This is a common practice in U.S. markets, and federal regulators have spent the last 10 years unsuccessfully trying to end the practice.

A second way to exercise market power is through *strategic bidding*, where generators understand that all market participants can make more money if they engage in defacto collusion, coordinating their bids to ensure higher prices than if they competed against one another. The nature of electricity markets makes such strategic bidding relatively easy, and sophisticated American regulators have thus far been unable to effectively control this collusive behavior.

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<sup>22</sup> Docket ER07-360, Page 2, <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11236060>

<sup>23</sup> [www.nyiso.com/public/webdocs/documents/regulatory/filings/2006/12/NYISO\\_Tariff\\_filing\\_re\\_ICAP\\_Mitigation\\_Measures122206.pdf](http://www.nyiso.com/public/webdocs/documents/regulatory/filings/2006/12/NYISO_Tariff_filing_re_ICAP_Mitigation_Measures122206.pdf)

Public interest groups like Public Citizen are not alone in offering criticisms of deregulation's failures. A regional alliance of large corporations, the *PJM Industrial Customer Coalition (PJMICC)*, was forced to make the following conclusions in a recent white paper:

*Based on current wholesale and retail pricing trends, as well as the ongoing expiration of retail price caps, PJMICC members have serious concerns that the promise of electric utility restructuring is not being fulfilled...energy-intensive businesses simply do not have the luxury to take a principled, long-term view that markets will eventually produce "just and reasonable results." Relying on declarations that market conditions will improve in the next few years is not a viable answer for businesses subjected to the press of global competition. Business decisions are being made today, based on many factors including energy costs. In deciding where to locate new businesses, close unprofitable businesses, and expand existing businesses, businesses require that every part of the supply chain be efficient and produce the lowest possible cost...Competition for the sake of competition, without close attention to producing benefits for ultimate end users, is not sound public policy.<sup>24</sup>*

This is echoed by the Cato Institute, a leading U.S. anti-government, free-market think tank which was recently forced to conclude:

*Politicians and policy analysts have almost totally disregarded a large body of academic literature regarding the efficiencies that are gained through vertical integration in the electricity sector. At the same time, those parties have enthusiastically embraced other studies that purport to estimate the benefits of switching to a so-called restructured regime consisting of independent generation and integrated transmission and distribution. The result has been the passage of electricity utility restructuring laws that may create production inefficiencies that shrink the net benefits of any move toward market provision of power supplies...They thus disregarded the benefits that might accrue from vertical integration.<sup>25</sup>*

## **Market Based Rates Fueling Investment in Existing, Rather Than New, Generation Capacity**

FERC argues that market-based rates are necessary to provide incentives to build new generation. The lure of strong returns from selling high-priced power in inadequately-competitive markets, the argument goes, will fuel investment in building new power plants. But the reality is that the profits earned from market-based rates—and the prospect of taping into those earnings by private equity firms and investment banks—have been invested in a frenzied bidding war over *existing* generation assets, resulting in an inefficient allocation of capital that promotes the “flipping” of valuable, existing power plants as though they were beachfront property. This type of “flipping” was not a

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<sup>24</sup> *What Large Commercial & Industrial Customers Need From the PJM Marketplace*

<sup>25</sup> Robert J. Michaels, *Vertical Integration and the Restructuring of the U.S. Electricity Industry*, July 13, 2006, [www.cato.org/pubs/pas/pa572.pdf](http://www.cato.org/pubs/pas/pa572.pdf)

feature of cost-of-service generation, as profits from the assets were not nearly as valuable. However, investment in new generation was always adequate to meet demand because of the utilities' *obligation to serve* consumers.

Repeal of the Public Utility Holding Company Act in 2005 has expanded the ability of non-utility companies to own power plants. These new entrants have had little interest in buying power plants for the purpose of making long-term investments to improve reliability or efficiency for the benefit of the consumer. Rather, their sole interest is to re-sell the power plants for a much higher price in a short amount of time. This process, repeated throughout the country, has resulted in inflated prices for power plants that the new owners attempt to recover from consumers.

Recent, high-profiled examples of premium prices paid for existing fleets of generation assets include:

- In 2004, four private equity firms—The Blackstone Group, Hellman & Friedman, Kohlberg Kravis Roberts and Texas Pacific Group—purchased Texas Genco (a portfolio of over 14,000 megawatts) from CenterPoint for \$900 million in cash, and in October 2005, the consortium re-sold the plants to NRG for a \$4.9 billion profit.<sup>26</sup>
- In 2007, Kohlberg Kravis Roberts, Texas Pacific Group, Goldman Sachs, Lehman Bros, Citigroup and Morgan Stanley made a \$45 billion offer for TXU's existing assets.
- The Wall Street investment bank Goldman Sachs and its partners bought Orion Power Holdings and its power plants in New York, Pennsylvania and Ohio in 1998 and sold them three years later to Reliant Energy for a profit of \$1 billion.<sup>27</sup>
- Sempra Energy bought nine power plants in 2004 for \$430 million and sold two of them less than two years later for more than \$1.6 billion.<sup>28</sup>
- Duke Energy's \$9 billion purchase of Cinergy's existing assets.
- MidAmerican's \$9.4 billion purchase of Pacificorp.
- In 2006, National Grid agreed to buy Keyspan for \$7.3 billion.
- In 2003, Goldman Sachs spent \$2.4 billion for Cogentrix Energy's existing fleet of plants.
- Northern Star Generation, an affiliate of American International Group, spent \$920 million for 25 of El Paso Corp.'s power plants in 2004.
- Teton Power, an affiliate of ArcLight Capital (which in turn is affiliated with John Hancock Life Insurance) paid over \$300 million for 12 of Aquila's power plants in 2004.
- In 2004, Sempra Energy teamed up with private equity firm Carlyle/Riverstone to form Topaz Power, which purchased nine power plants from AEP for \$430 million.

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<sup>26</sup> Simon Romero, "The Deal That Even Awed Them In Houston," *The New York Times*, November 23, 2005.

<sup>27</sup> Aaron Elstein, "Wall Street Buys Power Plants," August 25, 2003, *Crain's New York Business*, Vol. 19 No. 34.

<sup>28</sup> David Cay Johnston, "In Deregulation, Plants Turn Into Blue Chips," *The New York Times*, October 23, 2006.

- Denali Power was formed by ArcLight Capital to acquire 12 power plants for \$558 million in 2004.
- In 2006, Duke Energy sold 6,300 MW of power facilities to LS Power for \$1.5 billion.

## **Needed Reforms**

It is clear that America's deregulation experiment has failed to deliver on its promises of delivering affordable or reliable service. Public Citizen provides the following reforms to restore accountability and transparency into electricity markets:

- Revoke market-based rate authority from all power producers, thereby returning U.S. markets to cost-of-service ratemaking, and instruct FERC to focus on its sole mandate under the Federal Power Act: enforcing "just and reasonable" rates.
- For those utilities that sold power plants to unrelated companies, it may be cost-prohibitive to attempt to re-acquire the facilities for a fair price. Therefore solutions include the approach the state of Delaware recently took, enacting legislation that forces the state's distributional utilities to conduct long-term, least-cost planning that must include a cost-benefit analysis comparing the benefits of acquiring existing or building new generation and investing in demand-reduction incentives for consumers. California has begun the process of ordering its utilities to re-acquire generation, and therefore placing those power plants back into the regulated ratebase.<sup>29</sup> The federal government should also provide, where necessary, incentives and assistance to states to help utilities re-acquire generation assets divested during deregulation.
- For those utilities that simply transferred their power plants to their own affiliates, states should take steps to encourage the parent company to return those power plants to the regulated utility.
- States should establish Power Authorities for the purpose of having a public entity acquire or build generation capacity. For example, the New York Power Authority operates a fleet of hydro and fossil-fuel peaker plants that not only help serve the state's demand, but also act to limit the ability of for-profit power sellers to price-gouge consumers by offering peaker power at cost, thereby driving down wholesale prices.
- Allow for *intervener funding*, where utilities must pay for the expenses incurred by public interest groups and labor unions for intervening in the state and federal regulatory process. Currently, because the legal and other costs are so high, public interest firms are largely absent from the regulatory process. Indeed, current law

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<sup>29</sup> [www.cpuc.ca.gov/PUBLISHED/NEWS\\_RELEASE/60770.htm](http://www.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/60770.htm)

authorizes such a program, but Congress has never appropriated money to fund it. The law states, in part: “There shall be an office in the Commission to be known as the Office of Public Participation...The Director shall also coordinate assistance available to persons intervening or participating or proposing to intervene or participate in proceedings before the Commission. The Commission may, under rules promulgated by it, provide compensation for reasonable attorney's fees, expert witness fees, and other costs of intervening or participating in any proceeding before the Commission...”<sup>30</sup>

- States must insist on regulators that will be accountable to citizens, not utility company special interests. Ending the ability of regulators to cash in through the revolving door of getting a lucrative job after serving on public utility commissions would help restore accountability. States should also explore the merits of allowing citizens to directly elect regulators, as long as candidates are not allowed to accept campaign contributions from utilities.
- Decentralized power sources such as distributed generation and wind and solar energy, should be promoted.
- Federal and state government investment in energy efficiency, such as building weatherization, should be promoted to reduce electricity demand.
- State and local governments can explore government-owned power, which provides lower-cost and more reliable service for millions of Americans across the country.

### **Addendum: Climate Change Policy**

The electric power industry accounts for 40 percent of U.S. carbon dioxide emissions—with coal-fired power plants accounting for four-fifths of these discharges. The U.S. accounts for one-quarter of the world’s carbon dioxide emissions, mainly because we are so inefficient in our energy consumption. Americans emit double the carbon dioxide per person than our major competitors in Europe and Asia<sup>31</sup> and our emissions as a share of our economic output exceed our competitors such as England, Germany and Japan by more than 30 percent.<sup>32</sup> The solution to addressing climate change is to implement policies that help Americans use less energy by giving better incentives for energy efficiency and conservation, and mandating increased use of clean renewable energy while phasing out use of coal power plants.

Specific solutions promoted by Public Citizen include:

- **Enact a 20 percent renewable energy standard by 2020.** Mandating the incremental increase of America’s reliance on wind, solar and other renewable

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<sup>30</sup> 16 USC § 825q-1

<sup>31</sup> [www.eia.doe.gov/pub/international/iealf/tableh1cco2.xls](http://www.eia.doe.gov/pub/international/iealf/tableh1cco2.xls)

<sup>32</sup> [www.eia.doe.gov/pub/international/iealf/tableh1pco2.xls](http://www.eia.doe.gov/pub/international/iealf/tableh1pco2.xls)

technologies to account for 20 percent of our electricity production by 2020 must be a centerpiece of any reform. Twenty-one states currently have similar renewable energy standards, and mandating a national target will help reduce greenhouse gas emissions.

- **Implement a strong, enforceable cap on carbon dioxide emissions.** Such a cap must impose annual, incremental decreases in the allowable carbon dioxide emissions to eventually reach a goal of a 80 percent reduction in 1990 greenhouse gas emissions by 2050. Such a plan is represented in S.309.<sup>33</sup> Such a plan not only meets the objectives of reducing future greenhouse gas emissions, but rewards those companies that have already taken positive steps since the legislation begins with 1990.
- **Establish a moratorium on new coal-fired power plants.** There are 150 proposed new coal power plants across the country. Establishing a moratorium on these projects would help open the door to increasing investment in clean alternatives and energy efficiency.
  - While **carbon sequestration** may have some feasibility in limited types of rock formations, too little is known about the long-term risks to groundwater and concerns about the CO<sub>2</sub> eventually escaping. For example, over 1,700 people died in 1986 after a limnic eruption released a huge cloud of naturally-formed carbon dioxide out of Cameroon's Lake Nyos. Could communities in America surrounding areas where thousands of tons of carbon dioxide from coal power plants are stored underground be at similar risk? Until more study is known of these and other risks, we cannot forge ahead with large-scale carbon sequestration.
- **Transfer all existing subsidies for the oil, coal and nuclear industries to energy efficiency and renewable energy incentives.** Residential energy use accounts for one-fifth of America's carbon dioxide emissions. Working families do not always have the financial resources to make the necessary investments in home weatherization and other energy efficiency measures needed to reduce energy consumption. For decades, American energy policy has prioritized subsidizing energy production at the expense of energy efficiency. Shifting billions of dollars from profitable coal and oil companies to families would provide the financial incentives necessary to allow households to use less energy. Families should also get bigger incentives for installing home renewable energy systems, such as solar panels.
- **Strengthen appliance efficiency standards and building codes.** Mandating strong energy efficiency standards for water heaters, appliances and buildings will save energy and families money over the long-term.
- **Do not implement a cap and trade system until all of its problems are addressed.**

### **Problems with “Carbon Trading” Proposals**

Implementing an enforceable “cap” on allowable greenhouse gas emissions is a sound policy that will reduce harmful emissions. But introducing a carbon trading market like

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<sup>33</sup> [www.govtrack.us/data/us/bills.text/110/s/s309.pdf](http://www.govtrack.us/data/us/bills.text/110/s/s309.pdf)



the one in Europe to supplement a carbon emissions cap is fraught with significant challenges.

Due to Enron's "dream list" lobbying for carbon trading,<sup>34</sup> Vice President Dick Cheney's National Energy Policy Development Group embraced carbon trading.<sup>35</sup>

Largely due to the single-handed efforts of the Enron Corp in the mid-1990s, America commoditized electricity by deregulating it in the 1990s with disastrous results. Companies like Enron also saw emissions trading markets as an opportunity to make enormous profits, but profits in carbon markets do not automatically translate into an efficient program to address global warming, as has been shown in Europe.

There are five general problems with carbon trading markets that must be addressed in order for such a system to work:

- Failure to set the correct "cap" renders the program ineffective at reducing greenhouse gas emissions
- Allocation of emissions credits should be auctioned to avoid over-compensating certain companies or industries able to exploit loopholes.
- Trading markets must be heavily regulated to avoid market manipulation, as currently-designed carbon trading markets mirror flawed natural gas and other manipulatable energy commodity markets.
- Strong enforcement must be established to police this new complex set of rules, which will require enormous administrative costs (which raises the question whether the money could be better spent making direct investments in energy efficiency and renewable energy).
- Firms that exceed their allocated emissions cap can simply purchase credits, thereby allowing them to continue polluting in the areas in which they operate.

Europe's cap and trade scheme has failed for two main reasons. First, Europe has struggled at establishing the right cap, consistently setting it too high and allowing most countries and industries to come in far below their projected allowable emissions. Some of this incorrect cap setting stems from political influence, but part of it is simply that it has proven to be quite difficult to approximate the right level.

Second, the price of carbon emissions has proven to be incredibly volatile. For example, in April 2006 trading reached a high of €29.80 a metric ton, but by March 2007 it had fallen to €0.95.<sup>36</sup> This price volatility paralyzes a market, rendering participants unable to plan investments given the fact that the market price swings wildly between highs and lows.

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<sup>34</sup> [www.citizen.org/documents/Kelliher.pdf](http://www.citizen.org/documents/Kelliher.pdf)

<sup>35</sup> Page 3-3, [www.whitehouse.gov/energy/Chapter3.pdf](http://www.whitehouse.gov/energy/Chapter3.pdf)

<sup>36</sup> [www.europeanclimateexchange.com](http://www.europeanclimateexchange.com)