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MARKET POWER IN POWER MARKETS: THE FILED RATE DOCTRINE AND COMPETITION IN ELECTRICITY

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MARKET POWER IN POWER MARKETS: THE FILED RATE DOCTRINE AND COMPETITION IN ELECTRICITY

State and federal initiatives have opened the American electric power industry to competition over the past four decades. Although the process has not occurred uniformly across the country, wholesale markets exist everywhere today. Independent power producers can now construct generation facilities and sell their output to utilities and direct purchasers through bilateral contracts. In many regions, centralized power markets have also been established and facilitate the sale of billions of dollars in electricity annually through hourly auctions.

As market forces have replaced direct price regulation in electricity, antitrust enforcement, however, has not expanded its role commensurately. Even though a lack of competition has been a chronic problem in power markets and arguably undermined the purpose of industry restructuring, federal courts have invoked the filed rate doctrine to prohibit private antitrust suits against generators and other market participants accused of collusive behavior. The courts have held that federal and state regulation is adequate to maintain competitive markets and have questioned their own ability to deter anticompetitive behavior. The courts have used this faulty line of regulatory adequacy combined with judicial deficiency to immunize power generators from antitrust damages liability.

While Congress or the Supreme Court should abolish the doctrine and allow for the antitrust laws to be fully enforced in electricity markets, eliminating this immunity is not sufficient to create competitive power markets and prevent repeats of the market manipulation seen in the California and Texas markets. The existence of private treble damages suits could have deterred collusive conduct like the anticompetitive financial arrangement between two major generators in the New York City wholesale market between 2006 and 2008. Yet, the antitrust laws are comparatively powerless to remedy the principal forms of anticompetitive behavior seen in power markets. Antitrust jurisprudence in the United States does not proscribe the exercise of unilateral market power and places high hurdles to finding liability against parties accused of colluding tacitly.

Given the limitations of traditional private antitrust remedies, federal and state regulators must focus on creating competitive market structures. They can take three concrete steps toward this end: police generator consolidation more carefully, encourage expansions of the transmission grid, and expose more ratepayers to price signals. Vigorous application of these broader competition policy measures is necessary to redeem a restructuring project whose results thus far have been, at best, uncertain.

I. INTRODUCTION

The late Alfred Kahn helped deregulate the American airline industry as the head of the Civil Aeronautics Board in the Carter Administration and advocated market pricing in other sectors of the economy in his roles as public commentator and scholar. He, however, was no dogmatic proponent of laissez faire and recognized that government regulation is necessary for

1 Jonathan L. Rubin, The Premature Post-Chicagoan: Alfred E. Kahn, Antitrust, Summer 2011, at 75, 76.
well-functioning markets. Beyond the state-enforced rules of contract, property, and tort necessary for a market economy even to exist, Kahn argued that as direct price regulation retreats antitrust enforcement must proportionately expand its role.\(^2\) Without antitrust enforcement, producers can collude with each other, merge to create monopolies, and exclude aggressive rivals and new entrants to raise prices and maintain them at a high level.\(^3\) Such conduct reduces economic efficiency and transfers wealth from consumers to producers, defeating a principal rationale for deregulation.\(^4\) Kahn thus viewed antitrust and markets as complements, not substitutes.\(^5\)

While market forces have been introduced into the electric power industry over the past three decades, the courts have declined to allow the private enforcement of antitrust laws in these new markets. Several circuits have used invoked the filed rate doctrine, which traditionally protected regulated prices from antitrust challenge, to immunize generators selling in competitive power markets from private suits under the Sherman Act. Since the Sherman Act is principally enforced through private actions for treble damages,\(^6\) the courts have effectively eliminated in electricity markets the application of one of the two major antitrust statutes.\(^7\) The courts, in applying the doctrine to bar private antitrust suits, have overstated the capability of state and federal regulatory agencies and understated their own competence. They have reasoned that regulatory oversight is sufficient to create and preserve competitive power markets and that

\(^4\) See Alfred E. Kahn, *I Would Do It Again*, REGULATION, Feb. 1988, 22, 28 (“Nothing is going to discredit deregulation more quickly and thoroughly than a failure of the government to enforce the antitrust and consumer protection laws, . . .”).
\(^5\) Rubin, *supra* note 1, at 80.
\(^7\) The government and private parties can still challenge mergers under Section 7 of the Clayton Act. The Federal Trade Commission can bring actions for equitable relief under the Federal Trade Commission Act, which has been for the most part interpreted to correspond closely to the Clayton and Sherman Acts.
antitrust litigation would only interfere with this objective. The collusive behavior that occurred in the New York City market between 2006 and 2008 illustrates the flaws in this logic: regulators failed to prevent an extended episode of anticompetitive conduct, which could have been deterred by a credible threat of treble damages liability.

While scaling back the filed rate doctrine’s application, judicially or legislatively, in wholesale electricity markets would be good policy, the practical benefits of abolishing this immunity may be modest. Private antitrust enforcement would help deter express collusion between suppliers, a practice that is unquestionably harmful to consumers and does occur on occasion in electricity markets. Yet, the principal forms of anticompetitive conduct in electricity markets – exercise of unilateral market power and tacit collusion – are either impossible or difficult to remedy under the antitrust laws as they are presently interpreted. Well-established antitrust principles hold that a firm with market power is entitled to use it to maximize profits and that parallel conduct by firms without any additional evidence of agreement between them is not illegal. Leaving aside an improbable reinterpretation of the antitrust laws, a legislative or judicial repeal of the filed rate doctrine is likely to provide only a modest improvement in electricity market outcomes.

The limits of antitrust underscore the central role of competition policy in creating competitive market outcomes. State and federal regulators should focus on creating market structures conducive to competition. They can take three specific steps toward this goal. First, they should police mergers in wholesale markets more vigorously and prevent generators from increasing their market power through consolidation and, if necessary, order generators to divest capacity to remedy chronically noncompetitive market. Second, given how transmission constraints create load pockets vulnerable to market power, the federal government and the states
should facilitate transmission expansions that widen the geographic scope of power markets. Third, on the demand side, state regulators should introduce pricing schemes that expose a larger fraction of retail customers to real-time prices. This can create some elasticity on the demand side and reduce the incentive of generators to exercise market power. If industry restructuring is to yield its long-awaited benefits, regulators must be play the lead role in creating and preserving competitive market conditions.

II. RESTRUCTURING THE ELECTRIC POWER INDUSTRY

Historically, the electric power industry was treated as a natural monopoly from generation to consumption. Most often, a single firm would be vertically integrated through the different stages of production: this utility owned the generation, transmission, and distribution facilities needed to produce and retail electricity.\(^8\) Because of the supposedly substantial economies of scale at all three levels of production and economies of scope between them, utilities were given exclusive franchises and insulated from new entry.\(^9\) To protect customers from this monopoly power, states imposed a cost-of-service regulatory regime on franchised utilities.\(^10\) State public utility commissions set rates (and still do in non-restructured states) that entitled utilities to recover their costs and earn a reasonable rate of return on their capital investments.\(^11\)

In the 1970s, the natural monopoly model in electricity faced growing disenchantment. Economic theory and anecdotal evidence started to suggest that the natural monopoly model was flawed and contributing to higher electricity rates for the public.\(^12\) Technological advances,

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\(^8\) Paul L. Joskow, *Restructuring, Competition and Regulatory Reform in the U.S. Electricity Sector*, 11 J. ECON. PERSPS. 119, 121 (1997)

\(^9\) Id.


\(^11\) Id.

furthermore, started to indicate that only certain segments of the industry had natural monopoly qualities. Because power generation has only modest economies of scale and the transmission grid can support wholesale commerce, the generation sector could be opened to market competition. While transmission and distribution remain natural monopolies, open access rules would allow them to support competition between multiple generation companies.

Over the past four decades, Congress and the Federal Energy Regulatory Commission (FERC) have taken several steps to lower regulatory barriers to entry in generation and establish non-discriminatory access to the transmission grid. The Public Utility Regulatory Policy Act of 1978 required utilities to purchase power from designated non-utility generators. Although it did not create competitive wholesale power markets, PURPA encouraged new entry into electricity generation. In 1992, Congress passed the Energy Policy Act, which directed transmission owners to provide grid access to non-affiliated generators. FERC in 1996 issued Orders 888 and 889 that mandated “open access” and transparent pricing of transmission facilities. Independent generators can enter the market knowing that vertically integrated transmission owners will not be able to discriminate against them when providing access to the grid. Because of Orders 888 and 889, competitive wholesale power markets exist throughout the country, even in states that have not otherwise restructured their utilities.

To address the issue of discrimination in transmission access, some states have gone beyond Orders 888 and 889. California, Texas, and many Northeastern states have required

13 Joskow, supra note 8, at 123.
14 Id. at 120.
15 Id. at 124.
18 18 C.F.R. § 35.28 (2011); 18 C.F.R. § 37.6 (2011).
transmission owners to sell most or all their generation facilities.\textsuperscript{20} This structural separation of generation and transmission eliminates the incentive of transmission owners to discriminate against nonaffiliated generators.\textsuperscript{21} In addition, many of the same states have directed transmission owners to join a regional transmission organization or independent system operator (collectively “RTOs” hereafter).\textsuperscript{22} RTOs are non-profit entities that operate the transmission grid and centralized wholesale power markets in a particular region or state.\textsuperscript{23}

In regions with RTOs, generators, in addition to selling power through bilateral contracts, can sell their output through a centralized spot market. Generators and load-serving entities submit supply bids and demand schedules, respectively, to the RTO for every hour of the following day.\textsuperscript{24} The market operator orders the supply bids form lowest to highest cost and sets prices based on the marginal cost of the most expensive unit necessary to meet demand in every hour.\textsuperscript{25}

III. Market Power in Power Markets

Despite its great promise, electricity restructuring has arguably failed to deliver significant benefits. The properties of electricity markets make them vulnerable to the exercise of market power, which has brought the value of the entire restructuring project into doubt. In fact, during the height of the California electricity crisis in 2000 and 2001, the wholesale markets

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\textsuperscript{20} Id. at 105. \\
\textsuperscript{21} Joskow, supra note 8, at 132-33. \\
\textsuperscript{23} Joskow, supra note 19, at 105. \\
\textsuperscript{24} See Richard Green, Reshaping the CEGB: Electricity Privatization in the UK, 1 UTIL. POL’Y 245, 246 (1991) (describing the operation of a single-price power “pool”). \\
\textsuperscript{25} Id.
\end{flushleft}
almost certainly produced worse rate outcomes than the traditional cost-of-service regime would have.\textsuperscript{26}

i. Why Electricity Markets Are Vulnerable to Market Power Abuse

Supply- and demand-side factors make electricity markets vulnerable to market power. Due to the infeasibility of large-scale storage, supply and demand must be in perfect balance at all times.\textsuperscript{27} Generation capacity faces a hard upper limit in the short and medium term. When demand approaches a system’s upper limit, output cannot be increased without seriously damaging generator equipment.\textsuperscript{28} New capacity can moreover only be constructed only over the long-term. A gas-fired combustion turbine plant takes two to three years to license and construct.\textsuperscript{29} A coal-fired power plant typically requires four years to bring online.\textsuperscript{30} A nuclear power plant may take even longer\textsuperscript{31} – cost overruns and delays, in fact, are major obstacles to any new nuclear power development.\textsuperscript{32} Because of these constraints in output, the supply of electricity becomes highly inelastic as demand approaches total installed capacity. On the demand side, consumers pay a uniform rate throughout the day even though the cost of producing power can vary from hour-to-hour.\textsuperscript{33} At off-peak, low demand hours, low marginal cost (but high fixed cost) coal-fired, hydroelectric, and nuclear baseload power plants set the

\textsuperscript{28} Id. at 29.
\textsuperscript{29} Id.
\textsuperscript{30} Id.
\textsuperscript{31} Id.
price. At peak, high demand hours, in contrast, high marginal cost (but low fixed cost) natural gas or oil combustion turbines set the price. Because most users are insulated from wholesale prices, the elasticity of demand for electricity is very low. Prices cannot play the rationing function they do in most markets.

**Figure 1**

Due to the institutional and engineering characteristics of electricity markets, generators that are critical to meeting load, known as “pivotal” generators, can profitably raise market prices. Since demand is largely unresponsive to price, the owners of pivotal units know that they

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35 Id.
will likely be ordered to run irrespective of their market bids. These generators can either withhold their supplies from the market (“physical withholding”) or submit bids above their marginal cost (“economic withholding”) to raise market prices above competitive levels. This strategy may be especially profitable for a pivotal generation owner that also has baseload capacity in its portfolio. If the peaking unit can be used to increase the market-wide price, the profits on baseload generation, which has a much lower marginal cost, may increase substantially.

In addition to their susceptibility to the exercise of unilateral market power, centralized wholesale markets are also vulnerable to collusion. Generators recognize that bidding at marginal cost will reduce collective profits and that it is in their mutual interest to engage in economic or physical withholding of capacity. The properties of centralized electricity markets may permit firms to collude tacitly – that is, raise prices jointly without any direct communication. Generators submit hourly bids to sell a homogeneous product on a daily basis and receive the same market price in every hour. Regular and frequent bidding into a single-price spot market ensures that detection and punishment of “cheating” on the collusive arrangement are feasible and reduces the threat of defection. Because “cheating” will result in a lower spot price for all generators, a generator that deviates from the collusive bidding pattern

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40 Id.
41 Id.
42 Id. at 260.
will likely be detected and punished in short order as other firms respond with marginal cost bidding and dissipate the collusive profits.\textsuperscript{46} In addition, the relatively rigid physical limits on generator capacity in the short run may make even one-time defection from a collusive arrangement unprofitable. In many industries, firms often cheat on collusive agreements because they can reduce prices slightly and profitably capture sales from rivals that abide by the collusive price.\textsuperscript{47} For generators, however, the “nameplate” capacity on their units represents a hard upper bound on their short run output.\textsuperscript{48} Thus, even if they underbid their competitors, they may not be able to steal their rivals’ sales because they are physically unable to expand their output adequately.

The inadequacy of the existing transmission grid has added to the problem of market power problems. Transmission congestion effectively splits a large regional power market into smaller submarkets – regions of the grid that cannot import low-cost power on account of grid congestion are known as “load pockets.”\textsuperscript{49} Because generators outside this area cannot meet its entire demand on account of constraints on the grid, the load pocket becomes reliant on generators situated inside it.\textsuperscript{50} When only a small number of companies own all the generation in a load pocket, they may have the ability and incentive to raise prices well above competitive levels unilaterally or jointly.

The following diagram illustrates how generators can exploit their market power, unilaterally or collectively, through the economic or physical withholding of output. The exercise

\textsuperscript{46} Id. at 283.
\textsuperscript{47} Rees, supra note 43, at 31.
\textsuperscript{48} Macatangay, supra note 44, at 259.
of market power can reduce economic efficiency and lead to massive wealth transfers from consumers to generators.

**Figure 2**

![Price and Quantity Diagram]

**ii. Regulatory Oversight of Power Markets**

FERC has established rules to prevent generators from exercising market power. The Federal Power Act (FPA) charges FERC with maintaining electricity rates that are “just and reasonable.” Under its restructuring initiatives, FERC has interpreted this provision as requiring all generators that want to sell at “market-based rates” to demonstrate that they do not have market power every three years. A generator that has market power must sell its power at

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52 Some commentators have questioned whether FERC has authority under the FPA to rely on market forces to set wholesale electricity prices. See Gerald Norlander, *May the FERC Rely on Markets to Set Electric Rates?*, 24 ENERGY L.J. 65, 73-74 (2003) (“[T]he essence of these market-based rates is that no definite rates or rate changes...
cost-based rates – that is rates that cover its costs and provide a reasonable return on its capital investment. FERC, moreover, also has authority under the FPA to review electric utility mergers prospectively\textsuperscript{53} – a responsibility it shares with state public utility commissions and the Department of Justice and Federal Trade Commission, which review mergers above certain asset and revenue thresholds under the Clayton Act.\textsuperscript{54} In the event prices remain above competitive levels persistently or structural conditions are noncompetitive, FERC can also impose market-wide price caps to prevent prices from rising to monopoly levels.\textsuperscript{55}

In addition to this prospective oversight, FERC has retrospective remedial powers at its disposal. FERC requires all market participants to file quarterly reports.\textsuperscript{56} If it finds that a generator has violated market rules through, for example, the exercise of market power, FERC can suspend a generator’s authority to sell at market rates\textsuperscript{57} – a costly penalty when market prices are high. FERC can also order generators to disgorge profits attributed to market manipulation.\textsuperscript{58}

The Energy Policy Act of 2005 (EPAct) granted FERC the authority to impose civil fines of up to $1 million per day for each violation of market rules, a substantial increase over the previous


\textsuperscript{57}Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorization, 105 F.E.R.C. ¶ 61,218 (2003).

\textsuperscript{58}\textit{Id.} at 62,148.
maximum of $10,000 per day per violation, and to refer matters to the Department of Justice for
criminal enforcement.\textsuperscript{59}

FERC in Order 2000 required that RTOs establish market monitoring units (MMUs) to
oversee daily market conduct and outcomes.\textsuperscript{60} MMUs have enacted rules to curb the exercise of
market power. Such rules include requiring generators to offer their entire uncommitted capacity
into the market – that is, refrain from physical withholding – and imposing bid caps on
generators that can influence market prices.\textsuperscript{61} Eastern markets have established bid caps of
$1000/MWh while California has imposed lower caps, citing less competitive structural
conditions.\textsuperscript{62} In load pockets, even more stringent rules apply because of the greater potential for
market power abuse.\textsuperscript{63} As a means of preventing tacit collusion, several markets permit the
release of generator bid data only after six months and without identifying generators.\textsuperscript{64} MMUs
also collect data on market performance and submit public reports to FERC annually.\textsuperscript{65} Although
MMUs have only modest remedial powers like issuing warnings to the offenders,\textsuperscript{66} they can
refer the matters to FERC, which can further investigate and bring enforcement actions.\textsuperscript{67}

\textsuperscript{62} Id. at 890.  
\textsuperscript{63} Id. at 891.  
\textsuperscript{64} Jose A. Garcia & James D. Reitzes, \textit{International Perspectives on Electricity Market Monitoring and Market Power Mitigation}, 6 \textit{REV NETWORK ECON.} 372, 392-93 (2007); This restriction on data dissemination has been criticized because it prevents third parties from studying market performance and allows generators manipulating the market to remain anonymous. See Frank A. Wolak, \textit{Managing Unilateral Market Power in Electricity} 10-12 (World Bank Policy Research, Working Paper 3691, 2005).  
\textsuperscript{66} Id. at 20.  
ii. Notable Episodes of Anticompetitive Behavior

Despite the existence of detailed regulatory oversight, substantial exercise of market power has been a defining feature of electricity markets. On several occasions, generators have raised market prices well in excess of competitive levels and transferred millions or even billions of dollars from consumers to themselves. The most serious and best documented episode of market power abuse occurred in California in 2000 and 2001.

In designing the state’s wholesale power markets, California regulators made several key mistakes. They fixed retail rates for a five-year period under the assumption that wholesale prices would be below retail rates during this time and allow the incumbent utilities to recover the “stranded costs” in their old investments.\(^{68}\) In other words, utilities would be allowed to recover a reasonable return on capital investments made under cost-of-service regulation, which were expected to have less value in a market environment. They also required the incumbents to sell all their non-nuclear generation capacity.\(^ {69}\) Five companies purchased this capacity; this proved to be another critical mistake as experience showed that five independent generators were not enough to produce competitive outcomes.\(^ {70}\) Beyond requiring divestitures, regulators prohibited long-term contracting, which required purchasers to obtain all their power through the spot market.\(^ {71}\) This restriction on long-term contracting was intended to create a liquid spot market.\(^ {72}\) It, however, also removed an incentive for generators to bid competitively in the spot market.\(^ {73}\) Despite these serious design flaws, in 1998 and 1999, the performance of the

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\(^{69}\) Id.

\(^{70}\) Id.

\(^{71}\) Id. at 396.

\(^{72}\) Wolak, *supra* note 64, at 2-3.

\(^{73}\) Under forward contracting, generators often agree to sell power at a fixed price. If their capacity is not sufficient to meet their contractual obligations, i.e., they are “short” on power, they will have to purchase power on the spot market to cover the difference. They thus have an incentive to maintain spot prices at competitive levels. See James B. Bushnell, Erin T. Mansur & Celeste Saravia, *Vertical Arrangements, Market Structure, and Competition: An*
California market compared favorably with the newly restructured markets in New England, New York, and the Mid-Atlantic, as measured by the average markup of wholesale prices over marginal cost.\footnote{74}{Frank A. Wolak, \textit{Diagnosing the California Electricity Crisis}, 20 ELECTRICITY J., Aug./Sep. 2003, 11, 20.}

Tighter supply-demand conditions set the stage for massive market manipulation in 2000 and the first six months of 2001. In the summer of 2000, the diminished snow pack in the hydroelectric-rich Pacific Northwest and increased demand in Arizona and New Mexico reduced the availability of imported power for California, which has been historically very dependent on out-of-state capacity.\footnote{75}{Id. at 21.} The reduction in exports from these states eliminated an important competitive constraint on the five major owners of in-state generation.\footnote{76}{Id.} With this reduction in out-of-state supply, in-state generators raised prices through the submission of bids in excess of marginal cost and strategically scheduled plant outages.\footnote{77}{Paul L. Joskow & Edward Kahn, \textit{A Quantitative Analysis of Pricing Behavior in California’s Wholesale Electricity Market During Summer 2000}, 23 ENERGY J. 1, 3-4 (2002); see Joskow, supra note 68, at 382 (depicting the dramatic spike in plant outages in the fall of 2000, vis-à-vis the fall of 1999).} Empirical evidence suggests that unilateral withholding was the main cause of increased wholesale prices and that tacit collusion was not necessary to bring about these noncompetitive outcomes.\footnote{78}{Steven L. Puller, \textit{Pricing and Firm Conduct in California’s Electricity Market}, 89 REV. ECON. & STATS. 75, 85 (2007); Frank A. Wolak \textit{Measuring Unilateral Market Power in Wholesale Electricity Markets: The California Market}, 93 AM. ECON. REV. 425, 430 (2003).} Other market strategies compounded the withholding of generation and frustrated regulatory solutions. Enron, which did not own generation but was an active marketer, overscheduled transmission capacity to create an
illusion of scarcity, and exported and reimported power as a means of evading statewide price caps.  

The crisis culminated in rolling blackouts throughout the state due to demand exceeding supply in January 2001. The fact that blackouts occurred at this time of the year starkly underscored the extent of generator withholding: demand could not be satisfied even though in-state installed capacity exceeded peak load by 14,000 MW (44,000 MW vs. 30,000 MW). The retail price freeze, moreover, wrought havoc on the state’s two largest utilities. Because retail prices remained fixed, demand did not decline in response to higher wholesale prices. Pacific Gas & Electric (PG&E) and Southern California Edison (SCE) had to continue to meet load, buying high-priced wholesale power and reselling it at the lower retail rates. The situation became so dire that PG&E filed for bankruptcy and the California wholesale market operator imploded. In the spring and summer of 2001, decisive state action finally ended the crisis. The state entered into long-term power purchase contracts with generators on behalf of PG&E and SCE, which brought the crisis under control as power no longer had to be purchased on the dysfunctional spot market. Once the crisis had largely subsided, FERC imposed an arguably superfluous market-wide price cap throughout the Western United States in June 2001 – something critics of FERC lassitude had called on it to do for six months earlier.

The costs of the crisis in California were staggering. Empirical analysis reveals that the market manipulation in 2000 resulted in hundreds of millions of dollars in deadweight losses and

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80 Wolak, supra note 74, at 24.
81 Id.
82 Id. at 29.
83 Id.
84 Id. at 30-31.
85 Id. at 31; Peter Navarro & Michael Shames, Electricity Deregulation: Lessons Learned from California, 24 ENERGY L.J. 33, 52-54 (2003).
transferred approximately $4 billion from consumers to generators. Over the entire period of the crisis from June 2000 to June 2001, market inefficiencies are estimated to have been nearly $20 billion. FERC has spent much of the past decade seeking disgorgement from the generators and power marketers that abused their market power.

While not as acute or as publicized as the California electricity crisis, the Texas wholesale power market experienced significant market power abuse in the summer of 2005. During a significant fraction of hours in that period, the capacity of each of the two largest generation owners was critical for meeting demand. If either entity withdrew its output from the market, demand would exceed supply, resulting in blackouts. The Texas market in 2005 had also exhibited more price “spikes” than it had in previous years. A further investigation by the market monitor found that TXU, the largest generator in the state, submitted bids above marginal cost during peak hours from June to September 2005 to raise market prices in the real-time market. TXU’s bidding behavior was estimated to have raised the average real-time price of power by 15.5% and elevated the total costs of power purchased on the real-time market by $70 million. TXU increased its own profits in the spot market by nearly $20 million. Although only a small fraction of power was purchased on the real-time market, higher prices on the real-time market typically affect expectations about future prices and can translate into higher prices

86 Borenstein, Bushnell & Wolak, supra note 26, at 1396, 1398.
87 Wolak, supra note 64, at 7.
90 Id. at 7.
91 Potomac Economics, Investigation of the Wholesale Market Activities of TXU from June 1 to September 30, 2005 27 (2007).
92 Id. at 30.
93 Id. at 33.
on bilateral contracts, as well.\textsuperscript{94} The total costs of TXU’s bidding strategy thus may have significantly exceeded $70 million.\textsuperscript{95} The Public Utility Commission of Texas (PUCT) initially announced it would seek $210 million in fines and refunds from TXU.\textsuperscript{96} Ultimately, however, the PUCT and TXU agreed to settle for only $15 million.\textsuperscript{97}

Between January 2006 and March 2008, KeySpan manipulated prices for in the New York City market for capacity. KeySpan is one of three major owners of generation in New York City.\textsuperscript{98} Because the New York City market is often separated from the larger New York State market due to transmission constraints, KeySpan had the incentive and ability to raise market prices.\textsuperscript{99} The market monitor had imposed a price cap to protect consumers in New York City from the effects of this concentrated market.\textsuperscript{100} In response to new entry in the New York City market, KeySpan wanted to acquire the assets of the Astoria Generating Company, one of its major rivals in the New York City market, but did not pursue this option because of the obvious antitrust concerns.\textsuperscript{101} Instead, KeySpan entered in 2009 into a swap contract with a financial services company.\textsuperscript{102} This financial services company, later revealed to be Morgan Stanley, entered into an offsetting swap with the Astoria Generating Company.\textsuperscript{103} Due to this arrangement, KeySpan obtained the right to a share of its rival’s supracompetitive profits from

\textsuperscript{94} Id. at 31.
\textsuperscript{95} Id.
\textsuperscript{96} Tom Fowler, TXU Faces Record Penalty, HOUSTON CHRONICLE, Mar. 29, 2007.
\textsuperscript{97} Tom Fowler, TXU Sibling Settles on Fine, HOUSTON CHRONICLE, Nov. 27, 2008.
\textsuperscript{98} See United States v. Keyspan Corp., 763 F. Supp. 2d 633, 635-36 (S.D.N.Y. 2011) (“[F]rom 2003 to 2008, Keyspan possessed market power in the New York City capacity market. As major electricity generators, the three firms were designated by the Federal Energy Regulatory Commission as ‘pivotal suppliers,’ meaning a portion of each firm’s output was vital to satisfy capacity demand.”).
\textsuperscript{99} Id.
\textsuperscript{100} Id. at 636.
\textsuperscript{101} Id.
\textsuperscript{102} Id.
\textsuperscript{103} Complaint at 3, United States v. Morgan Stanley, S.D.N.Y. (No. 11-cv-6875).
capacity sales. As a result, KeySpan had an incentive to bid its capacity at the level of the market cap: although it lost some sales on account of its higher bids, it more than recouped this loss through higher margins on its remaining capacity sales and proceeds from Astoria’s inflated profits.

During the twenty-six month period in which this arrangement remained in effect, this arrangement resulted in significant wealth transfers from ratepayers in New York City to KeySpan and other generators situated within New York City. KeySpan increased its own profits by $49 million, and some estimates suggest that consumers may have paid approximately $159 million more for power in 2006 alone on account of KeySpan’s anticompetitive swap arrangement. In response, the Department of Justice sued KeySpan and Morgan Stanley for violating Section 1 of the Sherman Act. It reached a settlement with the two parties, requiring KeySpan and Morgan Stanley to disgorge $12 million and $7 million, respectively, in profits attributed to their anticompetitive behavior.

IV. THE MISGUIDED APPLICATION OF THE FILED RATE DOCTRINE TO ELECTRICITY MARKETS

In nearly all industries in which market forces set prices, private parties, whether direct customers or rival firms, can bring treble damage actions against parties accused of anticompetitive behavior under the Sherman Act. Section 1 governs anticompetitive conduct by multiple firms, and Section 2 addresses anticompetitive conduct by a single firm. Private
antitrust enforcement aligns the interest of firms with the public interest. The threat of treble damage liability helps ensure that markets reach competitive outcomes and maximize benefits for consumers and society as a whole.

Despite the persistent problem of market power in wholesale power markets, several circuits have immunized generators from private antitrust suits under Section 1 of the Sherman Act. Invoking the filed rate doctrine, a legal rule originally developed to preclude antitrust enforcement in industries subject to direct price regulation, courts have held that private plaintiffs cannot bring suit against sellers in wholesale power markets. The federal courts have reasoned that regulatory oversight is adequate to create and maintain competitive markets and that antitrust enforcement would interfere with this regulatory scheme.

a. Origins of the Filed Rate Doctrine

The Supreme Court established the filed rate doctrine in the 1920 case *Keogh v. Chicago and Northern Railroad*. The plaintiff, a firm manufacturing excelsior and flax products in St. Paul, Minnesota, shipped its products on the defendant railroads. It alleged that the defendants had violated Section 1 of the Sherman Act by agreeing on shipping rates before submitting them to the Interstate Commerce Commission, the federal agency in charge of regulating the railroad industry at the time. The plaintiff claimed that but for the agreement among the railroads it would have paid less for shipping flax and sought damages to compensate for the inflated rates and lost profits on account of higher freight rates.

Justice Louis Brandeis, writing for a unanimous Court, held that the Interstate Commerce Act (ICA) immunized railroads from private antitrust suits. The Court reasoned that the existence

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111 260 U.S. 156 (1920).
112 Id. at 159.
113 Id. at 160-61.
114 Id. at 160.
of the regulatory scheme administered by the Interstate Commerce Commission (ICC) eliminated the need for private antitrust damages on multiple grounds. First, the Court stated that the need for an antitrust remedy was eliminated because the Interstate Commerce Commission reviewed rates and could award damages to shippers harmed by “unreasonably high” or “discriminatory rates.” Second, it held that the published rates could not be modified through contract or tort because that would violate the prohibition on discriminatory rates. Private parties that recovered damages for antitrust violations would, in effect, be paying lower rates than similarly situated parties that did not pursue an antitrust action. Third, the plaintiff would have to prove the lower rate would have conformed to ICA requirements – a determination that only the ICC can make. Last, it held that the plaintiff’s damages would be speculative because of no clear counterfactual – it was uncertain how lower rates would have affected the plaintiff’s profits because all its rivals would have also enjoyed lower rail rates. While foreclosing the possibility of a private damages remedy, the Court held that the federal government could seek injunctive relief, forfeitures, and criminal charges against the defendants under the antitrust laws.

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115 See id. at 162 (“A rate is not necessarily illegal because it is the result of a conspiracy in restraint of trade in violation of the Anti-Trust Act. What rates are legal is determined by the Act to Regulate Commerce. Under § 8 of the latter act the exaction of any illegal rate makes the carrier liable to the ‘person injured thereby for the full amount of damages sustained in consequence of any such violation’ together with a reasonable attorney’s fee. Sections 9 and 16 provide for the recover of such damages either by complaint before the Commission or by an action in a federal court. If the conspiracy here complained of had resulted in rates which the Commission found to be illegal because unreasonably high or discriminatory, the full amount of damages sustained, whatever their nature, would have been recoverable in such proceedings.”).
116 Id. at 163.
117 See id. (“If a shipper could recover under § 7 of the Anti-Trust Act for damages resulting from the exaction of a rate higher than that which would otherwise have prevailed, the amount recovered might, like a rebate, operate to give him a preference over his trade competitors. It is no answer to say that each of these might bring a similar action under § 7. Uniform treatment would not result, even if all sued, unless the highly improbable happened, and the several juries and courts gave to each the same measure of relief.”).
118 Id. at 163-64.
119 Id. at 165.
120 Id. at 161-62.
The Supreme Court in the 1986 decision *Square D Co. v. Niagara Tariff Bureau, Inc.* affirmed the filed rate doctrine.\(^{121}\) The plaintiff sought damages from a group of trucking companies it alleged had fixed the rates on freight transportation between the United States and Canada.\(^{122}\) While the members of the Niagara Tariff Bureau had filed their rates with the ICC, they had not obtained permission from the ICC to engage in joint rate setting.\(^{123}\) The district court and the Second Circuit held the rates were immune from antitrust challenge under the filed rate doctrine.\(^{124}\) In affirming the district court decision on account of binding Supreme Court precedent,\(^{125}\) Judge Henry Friendly of the Second Circuit nonetheless questioned its wisdom, especially when the relevant regulator rubber-stamped market rates. He stated that the considerations that had motivated Justice Brandeis to create the filed rate doctrine in *Keogh* were arguably never valid and certainly not valid when a regulator allows market forces to set rates.\(^{126}\) Justice John Paul Stevens, writing for an eight-justice majority, commended Judge Friendly’s critique of the filed rate doctrine but affirmed the sixty-six year-old doctrine on stare decisis grounds and held that only Congress could repeal it.\(^{127}\) Justice Thurgood Marshall dissented and said the Court should adopt the reasoning in Judge Friendly’s opinion and overrule *Keogh*.\(^{128}\)

b. Application of the Doctrine to Power Markets

The federal circuits that have addressed antitrust claims against participants in wholesale power markets have applied the doctrine to bar private antitrust damages actions. They, however, have not come to a uniform conclusion as to the doctrine’s precise bounds. They have all barred claims under Section 1 of the Sherman Act. Some circuits have used the doctrine to dismiss

\(^{121}\) 476 U.S. 409 (1986).
\(^{122}\) Id. at 413.
\(^{123}\) Id. at 413-14.
\(^{124}\) Id. at 414.
\(^{125}\) *Square D Co. v. Niagara Tariff Bureau, Inc.*, 160 F.2d 1347, 1349 (2d Cir. 1985).
\(^{126}\) See id. at 1352-54 (critiquing Justice Brandeis’ reasoning in *Keogh*).
\(^{127}\) *Square D*, 476 U.S. at 423-24.
\(^{128}\) Id. at 424-25 (Marshall, J., dissenting).
Section 2 claims; others have recognized a so-called “competitor exception” to the doctrine and left open the possibility that firms in power markets can bring suits against rivals accused of anticompetitive behavior.

In *Town of Norwood v. New England Power*, the First Circuit approach the filed rate doctrine with some skepticism but still endorsed its basic rationale and dismissed two of the plaintiff’s three claims. The plaintiff, a municipally owned retail electric cooperative, alleged that the defendant, an owner of generation facilities, had committed multiple antitrust violations. In its complaint, the plaintiff alleged that the defendant had fixed prices with rival generation companies in violation of Section 1, engaged in a price squeeze in violation of Section 2 by providing more favorable wholesale rates to its retail affiliates, and sold generation assets in violation of Section 7 of the Clayton Act. The defendant had taken these actions as a part of Massachusetts’ restructuring of its electric power industry and had received approval from FERC and the Massachusetts and Rhode Island public utility commissions. The court observed that FERC still regulated wholesale rates even though they were set by market forces. Suggesting that this ongoing oversight is not necessary for the filed rate doctrine to apply, the court added that “it is the filing of the tariffs” rather than “any affirmative approval or scrutiny by the agency” that triggers the doctrine.

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129 See 202 F.3d 408 (1st Cir. 2000).
130 Id. at 414.
131 Id.
132 Id. at 413-14.
133 See id. at 419 (“[I]f New England Power’s rate were truly left to the market, with no filing requirement or FERC supervision at all, the filed rate doctrine would by its terms no longer operate. But unlike some other regulatory agencies, FERC is still responsible for ensuring ‘just and reasonable’ rates and, to that end, wholesale power rates continue to be filed and subject to agency review.”).
134 Id.
Because of its somewhat skeptical position on the filed rate doctrine, the court in *Norwood* proceeded to examine each antitrust claim at greater length.\(^{135}\) The court dismissed the Section 1 claim on grounds that the plaintiff mischaracterized an unfavorable customer-supplier contract between itself and the defendant as horizontal price fixing.\(^{136}\) When it considered the Section 2 price squeeze claim, the court noted that finding antitrust liability on the basis of a price squeeze would interfere with FERC’s regulatory scheme and “require the alteration of tariffs” because FERC had set the wholesale rate at issue.\(^{137}\) The plaintiff claimed that its price squeeze claim should be allowed to proceed because it was a rival of the defendant and thus could invoke the “competitor exception” of the filed rate doctrine.\(^{138}\) The court refused to take a categorical position on this exception and instead noted that Norwood was principally bringing a claim as an aggrieved customer of the defendant.\(^{139}\) The court also questioned whether the defendant had the monopoly power required for finding a Section 2 violation and added that insofar as New England Power had a transmission monopoly that FERC regulated it under Order 888.\(^{140}\) Finally, it disputed the merits of the plaintiff’s Section 7 claim but allowed it to proceed because the filed rate doctrine does not foreclose private challenges to anticompetitive mergers.\(^{141}\)

Compared to the First Circuit in *Town of Norwood*, the Third Circuit in *Utilimax.com, Inc. v. PPL Energy Plus, LLC* showed little hesitation in applying the filed rate doctrine to bar an

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\(^{135}\) *See id.* at 420 (“[T]he law on the filed rate doctrine is extremely creaky. . . . Yet this case is not a good vehicle for considering any cutting back on the doctrine, to whatever extent *Square D* permits adjustment, partly because the Sherman Act claims pressed by Norwood are themselves so doubtful.”).  
\(^{136}\) *Id.* at 421.  
\(^{137}\) *Id.* at 420.  
\(^{138}\) *Id.*.  
\(^{139}\) *Id.*.  
\(^{140}\) *Id.* at 420-21.  
\(^{141}\) *Id.* at 422.
antitrust claim. The plaintiff was a competitive retailer in Pennsylvania, and the defendant was both a competitive retailer and owner of generation capacity. The plaintiff alleged that the defendant was the only generator to own excess generation capacity and used its position to increase wholesale prices in violation of Section 2 of the Sherman Act. Without acknowledging the existence of market prices or examining the scope of FERC regulation, the court stated “a plaintiff may not sue the supplier of electricity based on rates that, though alleged to be the result of anticompetitive conduct, were filed with the federal agency responsible for overseeing such rates.” The court, however, acknowledged that the filed rate doctrine’s competitor exception is recognized in the Third Circuit. It ruled that the plaintiff was not eligible for this exception though because it had been injured in its capacity as a customer of the defendant – paying supracompetitive prices for wholesale electricity – rather than as a competitor of the defendant.

The Fifth Circuit in Texas Commercial Energy, LLC v. TXU Energy Inc. applied the filed rate doctrine to bar an antitrust action against conduct similar to what the Third Circuit addressed in Utilimax. The plaintiff, a competitive retailer in Texas, alleged that the defendants, generation owners including TXU, had increased wholesale electricity prices in February 2003 through manipulative behavior. Unlike wholesale power markets in the rest of the country, which are regulated by FERC, only the Public Utility Commission of Texas (PUCT) supervises

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142 378 F.3d 303 (3d Cir. 2004).
143 Id. at 305-06.
144 Id.
145 Id. at 306.
146 Id. at 307.
147 See id. at 307-08 (“The result of Utilimax’s inability to buy capacity offered by PPL in the wholesale market was that it went out of business in the retail market and PPL had one fewer competitor in that latter market. That result, however, came about because Utilimax (as a customer of PPL) could not afford to buy capacity. While the ramifications were felt in its competitor role, the damage to Utilimax occurred because of its status as a customer of PPL.”).
148 413 F.3d 503 (5th Cir. 2005).
149 Id. at 506-07.
the market in Texas. The court stated that the filed rate doctrine still applies when a state regulator, rather than a federal regulator, is entrusted with market supervision. It further held that the doctrine applies even when market forces set prices. Describing the PUCT’s regulatory scheme, the court insinuated that it is adequate to ensure a well-functioning market. The court did not take a position on the competitor exception and ruled that the issue was moot because the plaintiff was injured in its capacity as a consumer.

Because of the California electricity crisis, the Ninth Circuit has had the opportunity to review multiple antitrust claims in electricity markets and has consistently applied the filed rate doctrine to bar the plaintiffs from obtaining relief. The Ninth Circuit has ruled that the filed rate doctrine forecloses purchasers of electricity from seeking antitrust and contractual damages due to market manipulation. Recognizing that the regulation of electricity had changed dramatically, the court has reasoned that the filed rate doctrine still applies because FERC maintains ongoing supervision of market-based wholesale prices. The Ninth Circuit has cited FERC’s power to grant and revoke market-based rate authority to generators, obtain quarterly reports from market participants, and review market rules in support of the notion that federal regulation is adequate to ensure competitive outcomes. It has also emphasized that the

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150 Id. at 506.
151 Id. at 509.
152 Id.
153 See id. at 509-10 (“[U]nder Bill 7, PUCT is required to ensure ‘safe, reliable, and reasonably priced electricity’ and ‘that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are unreasonably preferential, prejudicial, discriminatory, predatory, or anticompetitive.’ PUCT also requires electricity to file detailed information to assess market power and even a market power mitigation plan for those generators that control more than 20% of the electricity market in a specific region. Accordingly, PUCT’s oversight over the market is sufficient to conclude that the BES energy rates are ‘filed’ within the meaning of the filed rate doctrine.”).
154 Id. at 510.
156 Snohomish, 384 F.3d at 762; Wah Chang, 507 F.3d at 1228; Grays Harbor, 379 F.3d at 651-52.
157 Snohomish, 384 F.3d at 760-61.
judiciary would not be able to offer satisfactory relief to plaintiffs, suggesting that it cannot accurately compute a “fair price” necessary to determine damages and that such an exercise would interfere with FERC regulation.\textsuperscript{158}

Some district courts have applied the filed rate doctrine to bar private antitrust claims against electricity market participants. Recently, the district court in the Southern District of New York applied the doctrine to dismiss a private damages action against KeySpan for its anticompetitive behavior in the New York City capacity market.\textsuperscript{159} The plaintiff has appealed the decision to the Second Circuit, which will soon decide whether it will follow the approach of the other appellate courts that have considered this issue.

c. Theoretical Flaws in the Courts’ Rulings

The courts’ justifications for applying the filed rate doctrine to electricity markets can be distilled down to two principal strands. First, FERC (or comparable state regulatory) oversight alone is adequate to deter anticompetitive behavior. Second, the judiciary is not capable of regulating behavior. The courts have stated that antitrust litigation would interfere with FERC’s regulatory oversight of the market and implied that the judiciary cannot compute a “fair price” that would have prevailed but for the alleged anticompetitive behavior. Each rationale is an independently sufficient to apply the filed rate doctrine. If either regulatory oversight is adequate for maintaining competitive markets or antitrust litigation cannot remedy anticompetitive behavior without interfering with the regulatory scheme, courts would be justified in barring antitrust litigation in electricity markets.

\textsuperscript{158} See id. at 761 (“We concluded that the district court was precluded from giving the plaintiff the relief it sought because, to award that relief, the district court would have had to determine a ‘fair price.’ We held that this would interfere with FERC’s exclusive jurisdiction to set wholesale rates[.].”); \textit{Wah Chang}, 507 F.3d at 1226 (“Try as it may, Wah Chang cannot avoid the fact that it seeks what amounts to having the courts determine what rates the Energy Companies should have charged instead of the rates they did charge. Wah Chang would inevitably drag the courts into a determination of what rate would be fair and proper.”).

Both grounds for applying the filed rate doctrine are flawed, however. FERC regulatory oversight is not adequate for protecting market competition. FERC has used economically questionable screening methods when granting generators the right to sell at market-based rates. FERC, moreover, cannot provide adequate deterrence against market manipulation because it has limited administrative resources and remedial powers. Second, courts can remedy anticompetitive behavior without undermining FERC’s regulatory obligation to maintain “just and reasonable rates.” In fact, in a market setting, FERC supervision and antitrust enforcement would work in harmony to create and maintain competitive wholesale power markets. With neither justification standing up to scrutiny, the filed rate doctrine’s present application is not justifiable.

i. FERC and RTO Regulation Are Not Adequate to Ensure Competitive Markets

The courts’ assumption that FERC supervision is sufficient to preserve competitive electricity markets is questionable. First, the agency until recently has used an economically suspect method of granting generators the authority to sell market-based rates. Second, even if it were to use a more stringent market power, it has limited resources and remedial powers and would realistically be unable to constrain all instances of anticompetitive behavior.

In granting generators market-based rate authority to in the 1990s, FERC used a flawed model of electricity markets. This model relied on market shares of uncommitted generation capacity – capacity not sold under long-term contracts. It assumed that transmission

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congestion never arose and that generators always competed in a wide geographic market.\textsuperscript{162} If a
generator had a share of 20\% or less in this broad market at peak load, FERC granted it the
authority to sell at market prices.\textsuperscript{163} Generators that had a share in excess of 20\% could still
obtain market-based rate authority if they offered evidence showing they did not have market
power.\textsuperscript{164} Otherwise, they would have to sell their power at cost-based rates.\textsuperscript{165} Since
transmission congestion can and does divide a large geographic market into several smaller
markets during a significant fraction of the time,\textsuperscript{166} ignoring constraints on the grid was the most
serious defect in this approach. For example, a large single market during the low demand hours
of the early morning may fragment into smaller markets as demand rises in the late morning and
causes congestion on transmission lines. Within one of these smaller geographic markets, a
generator could have a market share greater than 20\% and exercise significant market power
because it faces only limited competition. Yet, FERC’s model would allow this generator to sell
its power at market prices if it had a share of 20\% or less in the wide geographic market.

While FERC to its credit has in recent years adopted more sophisticated screening
methods, these tests still have important limitations. These models take transmission constraints
into account when defining geographic markets.\textsuperscript{167} Generators that can establish that they have a
share less than a certain threshold in the relevant markets and that they are not pivotal – that is,

\textsuperscript{162} Helman, supra note 61, at 885.
\textsuperscript{163} Bohn, Celebi & Hanser, supra note 161, at 54.
\textsuperscript{164} Id.
\textsuperscript{166} See, e.g., U.S. DEPT. OF ENERGY, NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY 45 (2009) (“As a
result of transmission congestion and losses, there was considerable variation in clearing prices across the [New
York] system. In the day-ahead market, eastern up-state prices were 27\% higher than average prices in western New
York, New York City prices were 8\% higher than average prices in the eastern up-state region, and Long Island
prices were 22\% higher than average prices in the eastern up-state region.”); id. at 83 (“CAISO reports that sources
of intra-zonal congestion within Southern California included . . . The Southwest Powerlink corridor, which includes
the Imperial Valley and Miguel transmission stations. Miguel is the choke point for transmission from Mexico and
Arizona to load in Southern California.”).
\textsuperscript{167} Helman, supra note 61, at 885.
not necessary to meeting demand – can sell their power at market prices.\(^{168}\) A generator that fails either test can still obtain market-based rate authority if it shows market concentration is below a certain threshold in the geographic markets of interest.\(^{169}\) Because of the engineering and institutional properties of electricity markets that give rise to inelasticity on both the supply and demand sides, market shares are not a good proxy for whether a generator has market power.\(^{170}\) A generator with even a small share may be able to withhold output to raise prices and increase its profits.\(^{171}\) The pivotality test that looks at whether a particular generator is necessary to meet demand is more appropriate for the dynamics of power markets.\(^{172}\) It, however, may still understate the likelihood that market power can be exercised jointly.\(^{173}\)

Beyond the limitations of its prospective market power screens, FERC does not have the resources to protect power markets from collusive behavior once generators have been granted market-based rate authority. Given how the features of electricity markets make them vulnerable to manipulation, constant vigilance against the exercise of unilateral or collective exercise of market power is critical.\(^{174}\) The bodies at FERC and the RTOs responsible for this oversight, however, have comparatively small staffs. FERC has over 100 employees in its Office of Market

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\(^{169}\) Helman, *supra* note 61, at 887.


\(^{171}\) See id. (“Even though one firm may have a relatively small market share at a given demand level, it may be the case that if that firm reduced output, no other firm would be able to replace that supply because of cost, capacity or transmission constraints.”).

\(^{172}\) See Gilbert & Newbery, *supra* note 168, at 3-4 (“An applicant passes the pivotal supplier test if its uncommitted capacity is less than the uncommitted capacity reserve margin. If an applicant passes the pivotal supplier test, the market has sufficient capacity to meet demand even if the market makes no sales. An applicant that fails the pivotal supplier test can demand a price above the competitive level and be assured of making some sales.”).

\(^{173}\) See id. at 4 (“The pivotal supplier test can be strengthened in straightforward ways to reduce the probability that a generator would be permitted to exercise market power. The PJM Interconnection employs a three-pivotal supplier test to determine when generators are reasonably likely to behave in a competitive manner.”).

\(^{174}\) Seth A. Blumsack, Jay Apt & Lester B. Lave, *Lessons from the Failure of U.S. Electricity Restructuring*, ELECTRICITY J., Mar. 2006, at 15, 29 (“FERC and the states should not be naïve in thinking that small changes in a regulated market, or in the restructured markets, will lead to the sort of vigorous competition that has characterized the deregulated airline, trucking, and telecommunications industries. The successful restructured markets rely on close monitoring and ordering generators to engage in behavior such as providing reactive power or providing electricity at cost.”).
Oversight and Investigation, and the RTOs have mostly outsourced market monitoring duties to specialized but small consulting firms.\textsuperscript{175} Even these knowledgeable and experienced regulators at FERC and the MMUs probably cannot ferret out all instances of anticompetitive market behavior after generators have received market-based rate authority.

When FERC does uncover anticompetitive market behavior, it, moreover, has only highly imperfect remedial tools at its disposal. FERC’s most potent remedies are ordering it the offending generator to disgorge profits from its anticompetitive behavior and suspending its market-based rate authority.\textsuperscript{176} Disgorgement is inadequate from the perspective of optimal deterrence, which requires the expected value of the penalty to equal the harm to society from the conduct.\textsuperscript{177} Because anticompetitive behavior is not always detected and sometimes goes unpunished, disgorgement provides inadequate deterrence against anticompetitive conduct.\textsuperscript{178} Generators may often be able to exercise market power with impunity and know that even if they are caught the most serious consequence to give up their ill-gotten gains. In contrast, suspension of market-based rate authority is a potentially serious penalty because being forced to sell at cost-based rates may lead to a significant reduction in future profits.\textsuperscript{179} This penalty, however,

\begin{footnotesize}
\begin{enumerate}
\item Kelliher, \textit{supra} note 55, at 19, 22.
\item See Rossi, \textit{supra} note 160, at 1628 (“To the extent that grounds for revocation can be established, the remedy is draconian: nationwide in scope (thus excessively harsh in its consequence), harmful to consumers to the extent it over-deters, and costly for regulators.”).
\end{enumerate}
\end{footnotesize}
has the negative effect of removing a player from the wholesale market and, in punishing one bad actor, may ironically short-circuit the larger process of creating competition.\textsuperscript{180}

   ii. Institutional Considerations Do Not Justify the Filed Rate Immunity

   The courts have suggested that applying the filed rate doctrine is also justified because the judiciary cannot remedy anticompetitive behavior and would interfere with undermine FERC’s regulatory scheme. Even with the limits of FERC regulation of wholesale power markets, either reason, if true, would make the filed rate doctrine quite defensible. Neither one of these rationales stands up to scrutiny, however.

   a. Private Antitrust Enforcement Would Generally Complement FERC’s Regulatory Mission

   While the antitrust laws can create potential conflicts with regulatory schemes in some areas, this threat does not exist with respect to policing collusive conduct. Both FERC and antitrust law seek to encourage market competition and discourage collusion. FERC does this through its granting of market-based rate authority and the threat of disgorging the profits of generators engaging in anticompetitive conduct. Antitrust litigation would supplement this regulatory mission through the threat of imposing treble damages on generators that collude.\textsuperscript{181} Given the resources and remedial constraints that FERC faces, the risk of antitrust liability may be vital to deterring anticompetitive behavior. Private plaintiffs can uncover instances of anticompetitive behavior that FERC does not. If FERC wanted to return to cost-of-service regulation for generators, antitrust law could conflict with this regulatory regime. FERC,

however, has indicated its commitment to creating competitive wholesale markets and shown no indication to revert categorically to the old regulation model.\textsuperscript{182}

In applying the filed rate doctrine, the courts have ignored how the antitrust laws operate in the new market environment. FERC no longer sets wholesale rates; there are price caps in some markets but market forces generally set wholesale prices – there is no fixed rate like there was in \textit{Keogh}. One of the defining features of electricity markets, in fact, is the volatility of prices even in a twenty-four hour period – the antithesis of fixed rates.\textsuperscript{183}

Aside from special cases like the essential facilities doctrine,\textsuperscript{184} antitrust aims to preserve a competitive process free of harmful collusion and exclusion by imposing damages on defendant found liable for such conduct.\textsuperscript{185} The norm of antitrust thus is not to dictate market outcomes or terms of dealing by firms.\textsuperscript{186} The concern that antitrust litigation would require the prospective “alteration of tariffs”\textsuperscript{187} (and consequently interfere with regulated rates) does not apply. In antitrust claims against participants in wholesale power markets, plaintiffs have generally alleged that the competitive process was short-circuited in some manner. Since \textit{Norwood}, in fact, plaintiffs have typically alleged that the defendants engaged in conduct resembling collusion.\textsuperscript{188} If the courts had allowed the claims to proceed and ruled in favor of the plaintiffs, they would have created not have created any regulatory conflict. Rather, they would


\textsuperscript{183} \textit{See supra} Part III.i.


\textsuperscript{185} Dennis W. Carlton & Randal C. Picker, \textit{Antitrust and Regulation} 14-15 (2007).

\textsuperscript{186} \textit{See} Martin, \textit{supra} note 160, at 301 (“[I]n section 1 actions arising from the crisis, a court need not determine whether the hypothetical rate would fit FERC’s standards; instead, the court need only estimate what electricity prices would have been anticompetitive conduct. A court would use that estimate for calculating damages, and nothing more. Such an estimate would inevitably be lower, thus running little risk it might be contrary to FERC’s ‘just and reasonable’ mandate.”).

\textsuperscript{187} \textit{Norwood}, 202 F.3d at 420.

\textsuperscript{188} \textit{See}, e.g., \textit{Snohomish}, 384 F.3d at 759; \textit{Simon}; 2011 U.S. Dist. LEXIS 57142, at 1; \textit{Tex. Commercial Energy}, 413 F.3d at 5-607.
have supplemented FERC’s regulatory objective of creating competitive power markets free from conduct like collusion.\textsuperscript{189}

Ironically, some courts in recognizing the “competitor exception” to the filed rate doctrine have turned institutional considerations on their head. The Third Circuit in \textit{Utilimax} stated that competitor suits do not trigger the filed rate doctrine because competitors are not the “intended beneficiaries” of regulation.\textsuperscript{190} In addition to being rigidly formalistic, this statement ignores the operation of regulation in electricity (and network industries, in general) today. Contrary to the Third Circuit’s reasoning, public utility regulation today is directed toward facilitating competition rather than setting final prices to consumers – in effect, competitors of incumbents are now the immediate “intended beneficiaries” of regulation.\textsuperscript{191} To facilitate wholesale market competition, FERC issued Order 888 to ensure that all generators have non-discriminatory access to the transmission grid – a natural monopoly. Courts like the Third Circuit, however, have left open the possibility that independent generators can ask the federal courts to resolve disputes over access to transmission. These issues involve prospective price setting and regulatory supervision – tasks for which the judiciary is ill suited and at a strong disadvantage vis-à-vis industry regulators.\textsuperscript{192} The competitor exception thus forces judges to resolve disputes that are furthest from their area of competence.

\textsuperscript{189} See Order 670, 114 FERC \$ 61,047 at P 24 (“[P]rohibited actions in Rule 2 (i.e., wash trades, transactions predicated on submitting false information, transactions creating and relieving artificial congestion, and \textit{collusion for the purpose of market manipulation} are all prohibited activities under new section 1c.2 of our regulations and are subject to sanctions and remedial action.”) (italics added).

\textsuperscript{190} See \textit{Utilimax}, 378 F.3d at 307.

\textsuperscript{191} See Joseph D. Kearney & Thomas W. Merrill, \textit{The Great Transformation of Regulated Industries Law}, 98 COLUM. L. REV. 1323, 1364 (1998) (“[T]he great concern is that incumbent providers that control bottleneck facilities will use their monopoly power to discriminate against competitors in the service segments that have been opened to competition. To prevent this from happening, a new set of regulatory obligations – including the duty to interconnect, to lease unbundled network elements, and to sell services for resale – is imposed on the owners of such bottleneck facilities and becomes the focal point of regulatory attention. In effect, the owners of natural monopoly facilities assume new common carrier duties toward their competitors, and these duties are regarded as more important than those they owe to their traditional customers.”).

\textsuperscript{192} Carlton & Picker, \textit{supra} note 185, at 32-33; Rossi, \textit{supra} note 160, at 1610.
b. Courts Are Capable of Remediyo Collusive Conduct

The courts have the remedial tools to deter collusive behavior in electricity markets. Rather than forcing courts to become industry regulators, the antitrust laws operate on the premise that treble damage awards provide significant deterrence against violations.\textsuperscript{193} Successful antitrust suits against colluding generators would operate in the same manner. Generators found liable of violating the antitrust laws would be required to pay treble damages to plaintiffs. The mere existence of a credible punishment would likely do a great deal to deter anticompetitive behavior.\textsuperscript{194}

Courts are also capable of computing a reasonable approximation of damages. In the context of collusion, courts compare the prices that prevailed during the period of anticompetitive conduct with the prices that would have prevailed but for the anticompetitive behavior.\textsuperscript{195} As is often the case with counterfactuals, it is not easy to determine how things would have played out in this alternate universe. To resolve this methodological difficulty, courts have accepted five methodologies to estimate the “competitive price” that would have existed but for the antitrust violations. They use: 1) prices that existed prior to the start of the antitrust violation (or any other period without collusion), 2) prices in a comparable market in which the antitrust violation did not occur, 3) average total costs, which should be a good approximation of prices in a competitive market, 4) variable costs multiplied by the margin in non-collusive periods, or 5) econometric models that estimate the price elevation effect of the collusive


\textsuperscript{194} Christopher R. Leslie, \textit{Antitrust Damages and Deadweight Loss}, 51 ANTITRUST BULL. 521, 565 (2006).

agreement. The difference between actual prices and these “but-for” prices is the measure of per-unit damages.

In the context of electricity markets, furthermore, computing the “but-for” price is a simpler administrative task than it is in most industries. In centralized electricity markets, prices are set through a process akin to a Dutch auction: the marginal cost of the most expensive unit needed to meet hourly demand sets the price for the entire market. Given the cost of fuel, technical characteristics of generators, transmission line limits, and hourly demand, the price of power that would have prevailed in each hour under competitive market conditions can be computed. Undoubtedly, this is a data-intensive process that requires the use of economists. This is hardly novel, though, as such experts are used in many other types of cases that courts decide.

In contrast to instances in which regulators set prices prospectively, computing retrospective damages with complete accuracy is not nearly as critical in cases involving collusive conduct. The purpose of damages is to deter future antitrust violations. When it comes to price fixing and other forms of collusion between horizontal rivals, overdeterrence does not appear to be an issue. Unlike other forms of economic behavior that can have both anticompetitive and procompetitive effects, collusion does not have any procompetitive benefits and so excessive deterrence is not a practical concern.

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196 Id. at 46-51.
197 Id. at 44-45.
198 Green, supra note 24, at 46.
The KeySpan episode in New York City illustrates the flaws in the courts’ reasoning. Regulators failed to prevent a two-year period of anticompetitive behavior that cost ratepayers perhaps in excess of $100 million. The existence of private damages remedies would compensate the parties injured directly by KeySpan’s conduct and help deter future instances of such market misbehavior. Notably, in its public statements, the Department of Justice suggested that it pursued disgorgement – a rarely used remedy – against KeySpan because the filed rate doctrine barred private damages actions. Given the imperfect ability to detect collusion, even full disgorgement of gains from anticompetitive behavior provides inadequate deterrence against such conduct. In theory, criminal penalties could be used more frequently against parties like KeySpan and their employees. Because of the seriousness of criminal penalties, particularly for individuals, they have been reserved for hard-core cartel behavior like express horizontal price fixing and bid rigging.

Even though it is unlikely to happen in the near future, Congress or the Supreme Court would be advancing sound public policy if they limited the filed rate doctrine’s application to exclusionary conduct in wholesale power markets. The filed rate doctrine should not be a bar against antitrust suits alleging collusive behavior in the industry. The distinction between collusive and exclusionary conduct offers guidance on how the filed rate doctrine should be applied in electricity markets. Courts have the ability to remedy the former conduct through

204 Bush & Mayne, supra note 178, at 282.
206 See KENNETH M. DAVIDSON, REALITY IGNORED: HOW MILTON FRIEDMAN AND CHICAGO ECONOMICS UNDERMINED AMERICAN INSTITUTIONS AND ENDANGERED THE GLOBAL ECONOMY 102-03 (2011) (“The last victory for an antitrust plaintiff in the Supreme Court was in 1993. The scorecard in the Supreme Court reads, according to my colleagues at the American Antitrust Institute as I am writing on February 26, 2009, 19 victories for antitrust defendants and 0 victories for antitrust plaintiffs. . . . In the 2010 American Needle case, the Supreme Court decided a case in favor of an antitrust plaintiff for the first time since 1992.”).
damage awards but are much less competent at addressing the latter.\textsuperscript{207} A sensible legal rule would be for purchasers of power to have all the usual antitrust remedies against generators that collude. In contrast, market participants that allege exclusionary conduct like discriminatory access to transmission should face the filed rate bar and instead seek relief before the industry experts at FERC.

V. DOCTRINAL LIMITS OF THE SHERMAN ACT IN REMEDYING ANTICOMPETITIVE CONDUCT IN POWER MARKETS

While the present application of the filed rate doctrine is unsound and allows some types of market misconduct to go unpunished, the actual benefits of a judicial or legislative repeal or limitation of the doctrine should not be overstated. The KeySpan episode shows how trimming the scope of the filed rate doctrine can produce better market outcomes. Antitrust damages actions would help deter instances of explicit collusion between rival generators. Such express collusion between generators, however, is not the primary reason why the restructuring of the industry has failed to deliver the promised consumer benefits. The primary forms of anticompetitive market behavior – unilateral withholding and tacit collusion – are permissible and difficult to prosecute, respectively, under long-standing interpretations of the antitrust laws. In other words, the antitrust laws do not proscribe the entire universe of anticompetitive conduct that occurs in electricity markets and, in fact, prohibit only a small subset of it.

i. The Exercise of Unilateral Market Power Is Not Proscribed by the Sherman Act

Today, Section 2 of the Sherman Act does not prohibit dominant firms from charging whatever price the market can bear.\textsuperscript{208} At times, Congress and the courts have considered using

\textsuperscript{207} See Carlton & Picker, \textit{supra} note 185, at 32 (“In an industry that becomes partially deregulated, antitrust can be used to control the unregulated segments, while regulation controls the rest. Indeed, partial deregulation of an industry can increase the importance to a rival of continuing rules of interconnection.”).

\textsuperscript{208} IIIA \textsc{Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law} § 720a (3d ed. 2008).
Section 2 to attack the mere existence of monopoly power. In 1976, Senator Philip Hart proposed expanding Section 2 to deconcentrate industries marked by durable monopoly power. This and similar proposals garnered significant attention but were never enacted. In his famed opinion in *Alcoa v. United States*, Judge Learned Hand raised the possibility of such “no-fault” monopolization (and ultimately rejected it). Since the mid-1960s, the Supreme Court has held some improper conduct that excludes rivals and possession of monopoly power are both necessary elements for establishing a monopolization claim.

The charging of high prices is arguably an important part of the competitive dynamic. In theory, high prices in a market, while imposing short-term pain on consumers, should attract new entry and help reallocate scarce resources toward high-value uses and away from low-value uses in the long run. The Supreme Court has taken this idea to an extreme in recent years. In its controversial ruling in *Verizon Communications v. Trinko*, the Supreme Court asserted in dicta that “[t]he opportunity to charge monopoly prices—at least for a short period—is what attracts ‘business acumen’ in the first place; it induces risk taking that produces innovation and economic growth.” Although it may be an empirically dubious position, the Court has thus treated the prospect of charging high prices as an essential part of the market dynamic – the antithesis of the no-fault monopolization position. Even when viewing the hyperbolic dictum of *Trinko* with skepticism, high prices also play an important role in electricity markets. They can impose short

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210 United States v. Aluminum Co. of Am., 148 F.2d 416 (2d Cir. 1945).
212 Areeda & Hovenkamp, *supra* note 208, at § 720a.
term pain on the public but they also signal to investors when, where, and what type of new generation needs to be constructed.\textsuperscript{214}

Because of the long-standing reading of the Sherman Act, generators that economically or physically withhold their power from the market do not Section 2 today. Generators that engage in such tactics can increase their own profits substantially and effect large wealth transfers from consumers. While such conduct may run afoul of RTO rules and other state and federal laws, it does not violate Section 2 under its present judicial articulation.\textsuperscript{215} Even if, for example, the parties that sued TXU in the wake of its anticompetitive conduct in the summer of 2005 had overcome the filed rate doctrine, they likely would have not obtained antitrust damages. By all appearances, TXU was only exercising its own market power to the fullest degree and did not engage in conduct that excluded rivals from competing against it on a level playing field.\textsuperscript{216} Likewise, based on the facts in \textit{Utilimax}, the plaintiff would not have been able to obtain damages even without the filed rate barrier. It alleged that the defendant had exercised its monopoly power but had made no suggestion that this monopoly power was obtained through exclusionary or other improper conduct.\textsuperscript{217} Even the California crisis appears to be the result of

\textsuperscript{214} See Peter Cramton & Steven Stoft, The Convergence of Market Designs for Adequate Capacity with Special Attention to the CAISO’s Resource Adequacy Problem 10-11 (Ctr. For Energy and Environmental Policy Research, Working Paper 06-007, 2006) (explaining how price caps intended to control the exercise of market power prevent peaker plants from earning revenues necessary to cover their fixed costs).

\textsuperscript{215} The Federal Trade Commission under Section 5 of the Federal Trade Commission Act could, in theory, try to seek injunctive relief against firms that exercise monopoly power. See William E. Kovacic & Marc Winerman, \textit{Competition Policy and the Application of Section 5 of the Federal Trade Commission Act}, 76 ANTITRUST L.J. 929, 930 (2010) (“Congress intended Section 5 to be a mechanism for upgrading the U.S. system of competition law by permitting the FTC to reach behavior not necessarily proscribed by the other U.S. competition statutes, including the 1890 Sherman Act and the Clayton Act.”).

\textsuperscript{216} See POTOMAC ECONOMICS, \textit{supra} note 91, at 27 (“TXU offered only 575.5 percent of its dispatchable energy at prices within $50 of its estimated [short-run marginal cost] on average during these intervals in the Study Period. Overall, TXU was a pivotal supplier during 84.3 percent of the price spike intervals. When a supplier is pivotal, some portion of the balancing energy demand must be satisfied by that supplier. Hence, TXU’s offers in the balancing market during the price spike intervals were often priced substantially higher than competitive levels, resulted in significantly less balancing energy from TXU being deployed and, therefore, constituted economic withholding of production.”).

\textsuperscript{217} See \textit{Utilimax}, 378 F.3d at 306 (“According to Utilimax’s complaint, during the first quarter of 2001 PPL was the only entity that had excess capacity available that Utilimax could purchase to satisfy its capacity obligations. Thus,
generators unilaterally maximizing their individual profits rather than colluding. This nadir in the electricity market experience, which resulted in billions in wealth transfers from consumers to producers, likely could not have been remedied after the fact under the antitrust laws.

ii. Tacit Collusion Is Often Beyond the Reach of the Sherman Act

Tacit collusion, also known as conscious parallelism, in oligopolistic industries has been one of the most intractable problems in antitrust law. Tacit collusion involves firms setting supracompetitive prices without any overt agreement or direct communication between them. In oligopolistic markets, firms recognize that their profits are dependent on the expected behavior of their rivals. Because of this strategic interaction, rivals may, for example, recognize it is in their own self-interest to follow the prices of a market leader, all without ever directly communicating with each other. The result may be to mimic the price effects of a cartel without any agreement between participating firms.

Noted antitrust scholars have debated what to do about tacit collusion in oligopolistic markets. Donald Turner, the head of the Antitrust Division at the Department of Justice in the Kennedy Administration and then-author of the leading antitrust treatise, thought that tacit collusion was a common problem in concentrated markets in the mid-twentieth century. He, under the regulatory system described above, PPL was able to ensure that it received the [capacity deficiency rate] for its excess energy either by offering it for sale in the daily auction market at the CDR price or by simply collecting CDR revenues from any retail supplier that failed to meet its capacity obligations. According to Utilimax, PPL engaged in these practices during the first quarter of 2001. As a result of this conduct, CDR revenues during that quarter were $11,767,541, compared to CDR revenues of $1,000 or less during the fourth quarter of 2000. PPL received almost all of the CDR revenues for the first quarter of 2001."

Puller, supra note 78, at 85; Wolak, supra note 78, at 430.


See Donald Turner, The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal, 75 HARV. L. REV. 655, 662 (1962) (“[H]ere and there an industry seems to resemble almost perfectly the book case of pure oligopoly; and in many instances, price competition seems much less vigorous than one would expect..."
however, argued that there is no satisfactory remedy for tacit collusion under Section 1 – how could courts enjoin firms from ignoring the pricing decisions of their rivals? He said that courts should not impose Section 1 liability for tacit collusion “without more in the way of ‘agreement’ than is found in ‘conscious parallelism.’” Instead, he called on using Section 2 of the Sherman Act to deconcentrate oligopolistic markets as a means of addressing persistent tacit collusion. Judge Richard Posner has presented a contrasting viewpoint on the matter. He has argued that tacit collusion is not as prevalent as Turner claimed and is not an inevitable product of oligopolistic markets because industry characteristics and practices often create strong incentives for undercutting. As a consequence, Posner has said that tacit collusion when it occurs is a product of “voluntary behavior” and should be addressed under Section 1. He has stated that courts should look to market conduct and price effects in determining whether firms have colluded tacitly. Regarding appropriate remedies, Posner endorsed the use of private damages, civil and criminal penalties, and, in exceptional cases, divestitures over injunctions dictating pricing behavior.

Although tacit collusion is not per se legal, plaintiffs still face significant evidentiary hurdles in bringing a successful claim. The Supreme Court has long held that mere parallel behavior is legal under the antitrust laws. To establish an agreement under Section 1, the plaintiff must show the existence of “plus factors” in addition to the existence of parallel market

224 Id. at 669.
225 Id. at 671.
228 Id. at 1578.
229 See id. at 1578-83 (listing economic indicia that suggest tacit collusion).
230 Id. at 1589-91.
conduct. The courts have not enumerated an exhaustive list of plus factors but some factors have been used repeatedly to establish liability in parallel conduct cases. An anticompetitive arrangement may be inferred if there is (1) proof that rivals did or could have communicated directly, (2) evidence of anticompetitive intent behind the parallel conduct, (3) behavior that is implausibly complex without detailed communication, or (4) behavior that is unlikely to be rational in the absence of an agreement. The 2007 Supreme Court decision Twombly v. Bell Atlantic only further raised the hurdles for plaintiffs trying to bring a successful claim of tacit collusion and encouraged the lower courts to grant defendants’ motions-to-dismiss unless plaintiffs can introduce plus factors at the pre-discovery stage in litigation.

Given the present state of antitrust jurisprudence, tacit collusion in electricity markets may be persistent and yet irremediable under the Sherman Act. Due to the often transparent pricing and repeated interactions in centralized wholesale power markets, collusion among generators without any direct communications may be straightforward to establish, and maintain in RTO regions. Hard physical constraints on output and daily market interactions make defection from such agreements less profitable and consequently less likely than in other industries. Tacit collusion in an industry that is conducive to it may make actual agreement unnecessary – a major virtue for firms since more overt forms of collusion carry the threat of serious penalties for participants. Generators may thus be able to engage in persistent parallel pricing above competitive levels without triggering any of the plus factors that could invite damages liability.

233 Baker, supra note 221, at 176-77; Kovacic, et al., supra note 222, at 31-44.
235 Macatangay, supra note 44, at 258-60; Blumsack, Apt & Lave, supra note 174, at 18-20.
236 Macatangay, supra note 44, at 259.
237 Baker, supra note 221, at 190.
238 Kovacic, et al., supra note 222, at 15.
VI. HOW TO REDEEM THE PROMISE OF ELECTRICITY MARKETS: CREATE BETTER MARKET STRUCTURES THROUGH COMPETITION POLICY

Given the unlikelihood of the filed rate doctrine being repealed and the practical limitations of private antitrust enforcement in electricity markets even if it were, state and federal regulators must play the lead role in promoting competitive electricity markets. Regulators should focus on creating market structures that are conducive to competition. Specifically, they should scrutinize generator mergers carefully and enjoin those that are likely to enhance market power, facilitate the construction of new transmission interconnections, and promote the adoption of demand-side response programs.

While market monitors should remain vigilant, constant oversight of markets has serious limitations and raises questions about the very purpose of restructuring. Intrusive monitoring of hourly outcomes may have unintended consequences and undermines the rationale of industry restructuring. Market monitors cannot always distinguish high prices that reflect a genuine inadequacy of generation from high prices that indicate the exercise of market power. A market monitor that alters outcome in the former case may be suppressing the price signals necessary to encourage the development of additional generation. A regulatory approach centered on market monitoring also raises a more fundamental question – what is the purpose of restructuring if it merely replaces one form of intrusive oversight – cost-of-service regulation –

239 See Paul L. Joskow, Lessons Learned from Electricity Market Liberalization, 9 ENERGY J. 9, 23 (2008) (“[M]arket power mitigation programs may be too aggressive, constraining prices from rising to competitive levels when demand is high, capacity is fully utilized, and competitive market prices should reflect scarcity values that exceed the price caps in place. Thus, these efforts to mitigate market power in the short run may create adverse generation investment incentives in the long run[.]”).

240 Id.
with another – market-based rates requiring constant monitoring - without creating public benefits?²⁴¹

i. Strengthening Merger Enforcement (and Considering Horizontal Deconcentration)

The existence of the filed rate doctrine has not affected the regulation of mergers in the electric power industry under the antitrust laws.²⁴² The Department of Justice and the Federal Trade Commission (hereafter referred to as the “antitrust agencies”) have the authority under Section 7 of the Clayton Act to prevent “mergers or acquisitions that may substantially lessen competition.”²⁴³ Under the Hart-Scott-Rodino Act, mergers and acquisitions that exceed a certain asset or revenue threshold must seek approval from the antitrust agencies before consummation.²⁴⁴ FERC has similar authority under the Federal Power Act and reviews mergers under the broader “public interest” standard; state public utility commissions have similar authority under state statutes.²⁴⁵ This makes merger enforcement activity a prospective exercise.²⁴⁶ FERC and the antitrust agencies must predict based on economic theory and empirical evidence from similar contexts whether a merger is likely to reduce competition.

²⁴¹ See Blumsack, Apt & Lave, supra note 174, at 29 (“FERC and the states should not be naïve in thinking that small changes in a regulated market, or in the restructured markets, will lead to the sort of vigorous competition that has characterized the deregulated airline, trucking, and telecommunications industries. The successful restructured markets rely on close monitoring and ordering generators to engage in behavior such as providing reactive power or providing electricity at cost.”); see id. (“The data show that prices for industrial customers, who were expected to be the principal beneficiaries [of restructuring], have no statistically significant differences between restructured and un-restructured states.”).
²⁴² Norwood, 202 F.3d at 422 (“For reasons that reflect more history than logic, the limitations on antitrust litigation derived from federal administrative regulation reflect a schizophrenic split. Direct antitrust attacks on federally regulated rates have . . . been limited by the filed rate doctrine. So have attacks on other regulated matters underlying rates (like power allocation among electricity customers). But the Supreme Court says there is otherwise no across-the-board antitrust immunity for agency-approved transactions.”).
To offer guidance to business, the antitrust agencies have issued the Horizontal Merger Guidelines (Guidelines), which have been adopted by FERC. The most recent Guidelines were issued in 2010. They explain how the antitrust agencies analyze mergers in a five-step process: (1) defining geographic and product market definition, (2) computing market concentration, (3) examining competitive effects, (4) weighing procompetitive efficiencies, and (5) considering the likelihood, sufficiency, and timeliness of new entry. Mergers that increase market concentration above a certain level or by a certain amount create a rebuttable presumption that the transaction is anticompetitive. To overcome this presumption, the merging parties can present evidence that the transaction will not reduce competition or will create offsetting economic efficiencies or that the threat of rapid entry from new firms will constrain the exercise of market power. The latest version of the Guidelines also state that direct effects evidence – for example, econometric evidence predicting a price increase from a merger – will play a major role in merger analysis when available.

The current use of concentration measures raises the possibility that the antitrust agencies and FERC approve mergers that are, in fact, anticompetitive. Electricity markets, due to the high degree of inelasticity on both the demand and supply sides, are extremely vulnerable to the...
exercise of unilateral and joint market power.\textsuperscript{253} Generators with market shares that would not raise antitrust concerns in many markets may have the incentive and ability to exercise market power.\textsuperscript{254} Consequently, relying on market share and derived concentration measures may not accurately screen anticompetitive transactions in electricity – the same issue FERC has faced in using market share and concentration measures in evaluating applications for market-based rate authority.\textsuperscript{255} The current screens are administratively cost effective but are likely far too tolerant of generator mergers that enhance market power.\textsuperscript{256}

Given the limited applicability of the Guidelines’ concentration thresholds, FERC and the antitrust agencies could rely more on prospective market simulations of mergers. Sophisticated computer models can simulate prices in a wholesale market given the level of demand, technical characteristics of the generation fleet, transmission line capacities, and fuel prices.\textsuperscript{257} They can now also model collusive behavior and complex bidding strategies.\textsuperscript{258} With the increasing sophistication of models, market simulations can forecast a merger’s competitive effects with greater precision.\textsuperscript{259} Since models can be rigged to reach the desired result, which is popularly captured in the saying “garbage in, garbage out,” careful calibration of models is important. To establish their analytical credibility in forecasting the price effects of a merger, models are

\textsuperscript{253} See \textit{supra} part III.i.
\textsuperscript{254} Borenstein, Bushnell & Knittel, \textit{supra} note 170, at 68.
\textsuperscript{255} Bush, \textit{supra} note 39, at 286.
\textsuperscript{256} See \textit{id.} at 283 (“The value of a merger screen to FERC, if there is one, is that it allows FERC to dispose of the merger in rapid fashion. However, the costs of such a screen involve both the possibilities that the screen will trip up competitive mergers (the problem of false positives) while unleashing some anticompetitive ones (the problem of false negatives).”); \textit{id} at 286 (“[M]arket share screens have the potential for ‘false negatives.’ While corrections for any ‘false positives’ brought about by market share calculations exist in the Guidelines in the form of entry and other analysis, there is no such corrective mechanism for ‘false negatives.’”).
\textsuperscript{257} Bastian, et al., \textit{supra} note 199, at 42-44.
\textsuperscript{259} \textit{id.} at 1732-33.
typically fine-tuned to “predict” past electricity prices accurately.\textsuperscript{260} Even with precise calibration, however, the complexity of market simulations represents a serious shortcoming. Due to the level of detail involved, performing market simulations is data- and time-intensive and thus can be very costly.\textsuperscript{261}

With the limitations of traditional concentrations screens and the difficulties associated with market simulation models, FERC could also consider simpler but still robust screens for determining whether a merger creates market power. The competitive residual demand (CRD) test developed by Richard Gilbert and David Newbery is such an example.\textsuperscript{262} The model computes market prices and profits for the merged entities based on their level of output under different demand conditions.\textsuperscript{263} Because it takes into account the distinctive features of electricity markets, it can identify anticompetitive mergers, which may not be caught using traditional concentration screens.\textsuperscript{264} Along with greater predictive accuracy, the CRD test is also more workable than equilibrium models because it requires only information on the capacities and variable costs of generators.\textsuperscript{265} A notable shortcoming of the CRD approach, however, is that it cannot predict whether a merger will enhance the likelihood of successful coordination – a limitation that Gilbert and Newbery acknowledge.\textsuperscript{266} To be more complete, the CRD analysis needs to be supplemented with an examination of a transaction’s effects on the probability of tacit coordination.\textsuperscript{267}

\textsuperscript{262} Id. at 223.
\textsuperscript{263} Id.
\textsuperscript{264} See id. at 222-27 (describing hypothetical merger that would have anticompetitive effects and would be deemed anticompetitive by CRD but not by concentration screens).
\textsuperscript{265} Id. at 229.
\textsuperscript{266} Id. at 227-29.
\textsuperscript{267} Bush, \textit{supra} note 39, at 282.
In the United Kingdom, power sector regulators have ordered divestitures of generation capacity – the more radical cousin of prophylactic merger control – in an attempt to improve market performance. In the British power market, market power was a serious problem in the first several years of its operation beginning in 1990. The generation assets of the previously state-owned monopoly were sold to three firms, with two firms owning all the capacity that set market prices. Market prices rose by 40% and remained high during the first four years of the market’s existence. Observers generally believed that the concentrated market was the culprit behind the high prices and disappointing results of industry restructuring: the two dominant generators exercised their unilateral market power and also colluded tacitly. The British electricity regulator, in response, threatened to refer these generators to the Monopolies and Mergers Commission (the British antitrust authority). To avoid referral, the generators agreed to sell some of their capacity to avoid referral. Following a series of divestitures and an overhaul of market rules, prices in the British power market have moved closer to competitive levels. Although the research is not clear on whether the divestitures or revision in market rules contributed to more competitive prices, some empirical evidence suggests that the divestitures were responsible for improved market outcomes.

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272 Id.
State legislatures should consider generation divestitures as a tool in addressing wholesale markets that remain noncompetitive even after other interventions. Antitrust law in the United States itself is powerless to reduce concentration unless it is the product of mergers.\textsuperscript{275} Even in the case of anticompetitive mergers that have been consummated, the antitrust agencies sometimes recognize that structural remedies may not be feasible on operational grounds.\textsuperscript{276} In electricity, divestitures can erode the economies of scale and of scope associated with large and diversified generation portfolios and create other operational problems.\textsuperscript{277} Given these concerns, divestitures should probably not be a first choice of solutions, especially if careful merger control can maintain competitive market conditions. Yet, divestitures should remain an option: market simulations have indicated that additional divestitures of generation capacity could have partly mitigated the painful effects of the California electricity crisis.\textsuperscript{278}

ii. Promoting Transmission Investment

Because the transmission grid was primarily built out in the old vertically-integrated, natural monopoly environment, it is not structured to accommodate the long-distance trading that occurs in power markets today.\textsuperscript{279} The inadequacy of the grid manifests itself in the form of transmission congestion. When transmission congestion occurs, more expensive generation located closer to load centers need to be dispatched because limits on line capacity prevent the most economical units from running at full capacity.\textsuperscript{280} The costs of transmission congestion are

\textsuperscript{275} See supra Part VI.ii (discussing how no-fault monopoly and oligopoly laws were considered in the mid-twentieth century as response to persistently high prices but never enacted into law).
\textsuperscript{277} Wolak, supra note 64, at 24-25.
\textsuperscript{278} James Bushnell, \textit{Looking for Trouble: Competition Policy in the U.S. Electricity Industry}, \textit{in ELECTRICITY DEREGULATION: CHOICES AND CHALLENGES} 256, 289 (James M. Griffin & Steven L. Puller eds. 2005).
\textsuperscript{279} Kirby & Hirst, \textit{supra} note 49, at 65–66.
\textsuperscript{280} Id.
substantial – consumers pay billions more annually due to inadequate transmission capacity.\(^{281}\)

Even though the physics of electricity are different, congestion on the grid can be analogized to how New Yorkers would have to purchase milk from more expensive in-state dairies if the highways and railroads to Vermont could not handle milk tankers.

The inadequacy of the existing transmission grid has been an important cause of market power problems. Transmission congestion effectively splits a large regional power market into smaller submarkets. These regions of the grid that cannot import low-cost power on account of grid congestion are commonly known as “load pockets.”\(^{282}\) Because generators outside the load pocket cannot meet 100% of demand on account of constraints on the grid, the load pocket becomes reliant on generators situated inside it.\(^{283}\) When only a handful of companies own all the generation in a load pocket, they may have the ability and incentive to raise prices well above competitive levels. KeySpan’s anticompetitive behavior between 2006 and 2008 exploited the fact that New York City is frequently separated from the rest of the New York market due to transmission congestion. KeySpan could conspire with its rival generator to raise capacity prices because the generation market within New York City is highly concentrated and often faces little or no competition from generators located upstate.\(^{284}\) If greater transmission capacity had existed between Upstate New York and New York City, markets in New York City would have been

\(^{281}\) See, e.g., MONITORING ANALYTICS, LLC, STATE OF THE MARKET REPORT FOR PJM 167 (2010); POTOMAC ECONOMICS, 2010 STATE OF THE MARKET REPORT FOR THE MISO ELECTRICITY MARKETS 85 (2011) (“Total [economic] congestion costs increased by $237.3 million or 58 percent from $408.2 million in the first six months of 2009 to $645.5 million in the first six months of 2010.”); (“Real-time congestion increased by 18 percent to $1.03 billion in 2010.”).

\(^{282}\) Kirby & Hirst, supra note 49, at 65-66.

\(^{283}\) Id.

structurally more competitive and could have prevented KeySpan from engaging in anticompetitive behavior.

FERC, to its credit, has been trying to promote transmission investment over the past decade. It has offered a variety of incentives to promote transmission investment, ranging from higher returns on equity to more favorable depreciation schedules. More recently, FERC issued Order 1000 that will improve the transmission planning process. It requires all transmission owners to be a part of a regional transmission body – a function being performed by RTOs in parts of the country where they exist. It also sets out high-level guidelines on how costs of new transmission projects – which are still regulated as natural monopolies for the most part – should be allocated. Despite some serious shortcomings, Order 1000 should help reduce some of the barriers to transmission development.

While FERC’s many initiatives in transmission deserve credit, Congressional preemption of state authority in this area is necessary if transmission investment is to occur at a socially desirable level. State jurisdiction over siting and cost allocation decisions has proven to be an important obstacle to building a grid that can support market transactions. State regulators have resisted and in some instances prevented the construction of new transmission lines that yield regional benefits but produce concentrated local costs. Although Congress granted FERC “backstop” authority to site transmission lines in the event state and local actors could not

287 Id.
288 Id.
291 Id.
approve or failed to act on transmission proposals, this authority has been ineffective in overcoming state and local resistance to transmission line development and was further neutered in a 2009 appellate ruling.\footnote{Id.}

The Palo Verde-Devers II line that Southern California Edison (SCE) proposed to build between Arizona and California illustrates how regional transmission projects have run aground at the state level. The line would have facilitated greater power exports from Arizona to California, which would have lowered power prices in California on account of improved dispatch and increased competition and also reduced emissions of air pollutants.\footnote{Mohamed Labib Awad et al., Using Market Simulations for Economic Assessment of Transmission Upgrades: Application of the California ISO Approach, in Restructured Electric Power Systems: Analysis of Electricity Markets with Equilibrium Models 241, 260, 265 (Xiao-Ping Zhang ed., 2010).} Arizona regulators, however, vetoed the proposal because they did not want residents of their state to bear the aesthetic and environmental costs of a project that would principally benefit Californians.\footnote{Paul Davenport, Arizona Regulators Reject New Electric Line to California, SAN DIEGO UNION-TRIB., May 30, 2007, available at http://legacy.signonsandiego.com/news/state/20070530-1728-wst-sharingpower.html.} Due to its inability to obtain the necessary approvals, SCE settled on building a more modest intrastate transmission facility in California instead.\footnote{Cassandra Sweet, Edison International Unit Wins Approval for Calif Transmission Line, DOW JONES BUS. NEWS, Nov. 20, 2009.}

### iii. Developing Demand-Side Response

The invisibility of real-time prices to most ratepayers is an important reason why market power has been such a serious and persistent problem in restructured electricity markets. In most markets, high prices translate into lower demand and act as a constraint on suppliers who try to raise prices, unilaterally or collectively. Setting high prices can result in a higher margin on existing sales but also lead to a loss of sales volume. The reduced quantity of sales may more than offset the effect of increased prices, making price increases unprofitable. In electricity markets, however, most consumers pay a fixed rate at all hours of the day regardless of the...
wholesale price. This insulation from the underlying price of electricity gives them little reason to reduce their consumption when supply-demand conditions are tight and wholesale prices are high. Because demand is highly inelastic, generators can increase prices without necessarily losing sales. Combined with the inelasticity of supply, demand-side inelasticity makes the exercise of market power highly profitable during hours of peak demand.

When customers pay a price that is tied to wholesale prices, they will likely change their electric consumption patterns. At present, the use of fixed price based on the average of hourly prices leads to a price that is too high in off-peak hours, when the wholesale price is low, and too low in peak hours, when the wholesale price is typically higher. Correcting this distortion can be expected to lead to increased consumption of power in the early morning and late night and decreased consumption in the late afternoon and early evening. For example, individuals could run energy-intensive home appliances like dishwashers and washing machines at hours when power prices are lower.

Demand-side bidding is one way of dealing with the problem of inelastic demand. Large customers, typically industrial firms, “bid” a demand increment that they are willing to curtail into the wholesale market and are treated like another source of “supply.” If the wholesale price matches or exceeds their bid in a given hour, these customers must curtail their demand by the bid amount or pay the wholesale price of power at the time. Allowing large consumers to

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296 Borenstein, supra note 33, at 196.
297 Id.
299 Id.
bid their demand can thus provide powerful incentives to ration power consumption during periods of high prices.

In recent years, regulators and utilities have also tried to expose a greater number of residential customers to wholesale prices (or some proxy of them). These programs create at least some modest variation in retail rates that reflect the varying costs of producing power at different times. Technological changes like advanced metering and remote control of appliances has permitted some experimentation in this area. Utilities have run pilot programs in which a small subset of residential ratepayers pay different peak and off-peak prices (time-of-use pricing) or very high rates during hours with very high demand (critical peak pricing) and receive enabling technologies like advanced thermostats that take electricity prices into account when setting temperatures.

Exposing customers, even a small fraction of them, to wholesale prices or some proxy of them can help discipline generators from exercising market power. If demand fell in response to higher prices, exercising market power would not be as profitable as it is currently. Generators would recognize that exercising market power would sometimes be unprofitable because it would trigger a fall in the quantity of power demanded. Experimental studies have suggested that demand-side responses could completely neutral the exercise of market power. Even if these encouraging experimental findings do not translate completely into real-world markets, demand-side response would, at the very least, create electricity markets that resemble other markets in which price signals play an important function in disciplining oligopolistic

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302 Faruqui & Sergici, supra note 298, at 194.
303 Id. at 193.
producers. Empirical research supports the theoretical argument that real-time pricing would lead to changed electricity usage even among residential consumers. Demand reductions in peak hours have ranged from 3% for time-of-use pricing schemes to 44% for critical peak pricing programs that been combined with enabling technologies. For profit-maximizing generators, the threat of the quantity of power demanded falling in response to higher prices would alter the economic calculus of exercising market power either unilaterally or jointly.

VII. CONCLUSION

Contrary to Alfred Kahn’s recommendations on how to transition from price regulation to markets, the courts have not permitted full enforcement of the antitrust laws as markets have replaced state regulators in setting electricity prices. Despite the chronic problem of market power in electricity markets, the courts have continued to apply the filed rate doctrine – created by the Supreme Court in an era in which regulators set final prices on many essential services – to bar private antitrust damages actions against power suppliers accused of anticompetitive conduct. By overstating the institutional capabilities of industry regulators and understating the competence of the judiciary, several circuits have held that even in a market environment courts should refrain from applying the antitrust laws to their fullest degree. Congress or the Supreme Court should limit the application of this doctrine that has created an oligopolistic market without the usual oversight from private antitrust enforcers. As the KeySpan episode in New York illustrates, private antitrust enforcement can help deter more explicit forms of collusive conduct between market participants.

Yet, eliminating the filed rate doctrine would not cure the persistent market power problems seen in electricity markets. The antitrust laws, as they have been interpreted for the

306 See Bushnell, supra note 278, at 289 (“Even a relatively modest elasticity of .07s, when applied to the entire system demand through a dynamic pricing regime, reduces wholesale prices by 40%.”).

307 Id. at 221.
past several decades, do not proscribe unilateral withholding and impose high evidentiary
burdens on establishing tacit collusion - the two principal forms of anticompetitive behavior
witnessed in electricity markets. The nearly yearlong California electricity crisis and TXU’s
elevation of wholesale prices in Texas likely could not have been remedied through private
antitrust damages actions. Although they inflicted significant harm on the public, in the case of
California to the tune of perhaps over $20 billion in wealth transfers, these episodes were likely
the result of unilateral profit maximizing behavior that does not run afoul of the antitrust laws as
they are interpreted today.

Because of the limits of private antitrust enforcement even in the absence of the filed rate
doctrine, state and federal regulators must play the lead role in creating competitive market
structures. They should examine mergers and existing horizontal market power with greater care
and sophistication, promote the construction of new transmission facilities, and encourage the
deployment of real-time pricing for ratepayers. The first two policies would address two supply-
side factors – high market concentration and small geographic markets – that have made power
markets susceptible to the exercise of unilateral and collective market power by generators. The
third policy would help remedy the inelastic demand that makes the exercise of market power so
profitable for generators. Although many skeptics view the creation of electricity markets as a
failed experiment, vigorous use of competition policy could still redeem the once-great promise
of industry restructuring.