

WHEN THE LIGHTS GO OUT: THE IMPACT OF HOUSE
BILL 6 ON REGIONAL TRANSMISSION
ORGANIZATIONS AND THE RELIABILITY OF THE
POWER GRID

INTRODUCTION

Delyla Torres lay on a hospital gurney; doctors hurried her towards the operating room.¹ Ms. Torres had inoperable liver cancer; but that day, after waiting over a year on the transplant list, she was finally going to receive a replacement organ.²

She was only moments away from the operating room door when the lights suddenly went out.³ Without electricity, the doctors were unable to complete the surgery.⁴ The liver, only good for a short period of time, was flown to someone else.⁵

Shortly after 4 P.M. on August 14, 2003, a large part of the northeastern United States plunged into darkness.⁶ The outage blacked out major cities, including New York, Toronto, Cleveland, and Detroit.⁷ In New York City, Times Square went dark; cars ground to a halt as traffic lights blinked out; commuters had to be pried out of subway cars and escape by foot through the tunnels.⁸ It was the largest power outage in our nation's history.⁹

But farther south, in Pennsylvania, the power outage was stopped in its tracks.¹⁰ What happened? A company called PJM Interconnection real-

¹ Denise Grady, *Blackout Shifts Transplant and 2 Lives Change Course*, N.Y. TIMES, Sept. 21, 2003, at A1.

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.* The hospital had a backup generator, but the doctors determined that it was too unreliable for such a long and complicated surgery. *Id.*

⁶ James Barron, *The Blackout of 2003: The Overview; Power Surge Blacks Out Northeast, Hitting Cities in 8 States and Canada; Midday Shutdown Disrupts Millions*, N.Y. TIMES, Aug. 15, 2003, at A1.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.* The exact cause of the blackout is still unknown, but preliminary reports say that the cause originated in Ohio, and was probably due to human error, including failure to properly trim trees near several important power lines. See Richard Perez-Pena & Matthew L. Wald, *Basic Failures by Ohio Utility Set Off Blackout, Report Finds*, N.Y. TIMES, Nov. 20, 2003, at A1.

¹⁰ *Blackout Investigators Eye Relay Switches*, USA TODAY, Aug. 29, 2003, at A2, available at http://www.usatoday.com/tech/news/techpolicy/2003-08-29-blackout-relay-switches_x.htm (last visited July 27, 2004).

ized that power was failing and isolated its area of the grid, thus keeping the lights on in many of the more southern states.¹¹

What is special about PJM? It is Regional Transmission Organization (“RTO”). RTOs are special organizations formed when several electrical utility companies in an area bind themselves together as encouraged under Federal Electricity Regulatory Commission (“FERC”) guidelines.¹² Prior to the existence of RTOs, the U.S. power grid was broken up into lots of little pieces each owned by different utility companies; these pieces were not well connected to one another.¹³ However, as the power grid has evolved, it has become necessary to transport power over longer distances.¹⁴ The old, fractured model of the power grid is not suited for this purpose, and as a result the development of a nation-wide energy market has been hindered.¹⁵

RTOs are meant to glue together this fractured grid. Once formed, an RTO operates the power transmission in its area.¹⁶ RTOs are responsible for the coordination, expansion, and maintenance of their particular section of the power grid—a sort of market-maker, traffic cop, and caretaker all rolled up into one.¹⁷ Proponents believe that the RTO model is a significant improvement over the old model of power-grid management, and will lead to increased competition and improved reliability in the U.S. power grid.¹⁸

However, moving towards the RTO model requires additional government regulations. Over the years, the United States has followed an almost cyclical path on regulation of our nation’s power industry. While power companies started out as unregulated entities, their monopoly power inspired Congress to begin regulating them during the 1930’s.¹⁹ However, recent years have seen a change in this regulation structure. In the past, utility companies had been viewed as the classic example of a natural monopoly.²⁰ A utility company typically controlled both the transmission and

¹¹ *See id.*

¹² *See* F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 2-3 (December 20, 1999).

¹³ AMY ABEL, CONG. RESEARCH SERV., No. RL32075, ELECTRIC RELIABILITY: OPTIONS FOR ELECTRIC TRANSMISSION INFRASTRUCTURE IMPROVEMENTS 1 (2003) [hereinafter ELECTRIC RELIABILITY].

¹⁴ *See id.*

¹⁵ *Id.* at 1-3.

¹⁶ F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 1-3 (December 20, 1999).

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ AMY ABEL & LARRY PARKER, CONG. RESEARCH SERV., No. IB10006, ELECTRICITY: THE ROAD TOWARD RESTRUCTURING 2 (2003) [hereinafter ROAD TOWARD RESTRUCTURING].

²⁰ *Id.* at 1. “Historically, electricity service has been defined as a natural monopoly, meaning that the industry has (1) an inherent tendency toward declining long-term costs, (2) high threshold investment, and (3) technological conditions that limit the number of potential entrants. In addition, many

the generation of power in a given geographic area—or, in other words, both the power grid and the power plants.²¹ However, this typical utility setup has changed in recent years.²² The Federal Energy Regulatory Commission (“FERC”)—the entity that governs utility companies—has begun to split up these monopolies, by encouraging the public utilities to separate transmission and generation of power.²³ This allows non-monopoly-owned power generators to compete across a now independently-owned power grid.²⁴

This deregulation has encouraged competition, but has also created a host of problems, including issues of unfair and discriminatory use of monopoly power by public utilities, decreases in the reliability of the power grid, and reduced investment in new infrastructure.²⁵ To these problems, the FERC has proposed the RTO as part of the solution.

However, many utility companies in the United States are still monopoly industries, and see few advantages for themselves in joining an RTO.²⁶ Because of this, Congress is considering legislation that would provide incentives to utilities that join RTOs.²⁷ Urged on by the recent blackouts in California and New York, this legislation would increase the amount of money RTOs can charge for transporting power along their section of the grid.²⁸

Specifically, the provisions to increase RTO participation are part of the Conference Report on House Bill 6, the Omnibus Energy Bill of the 108th Congress.²⁹ These provisions would order the FERC, which regulates and sets prices in the electrical industry, to set new, higher prices for power transmitted by an RTO.³⁰ These so-called “incentive-based rates” should make RTOs more profitable, thus making the grid more reliable and caus-

regulators have considered unified control of generation, transmission, and distribution as the most efficient means of providing service.” *Id.*

²¹ AMY ABEL ET AL., CONG. RESEARCH SERV., No. RL31469, ELECTRIC UTILITY RESTRUCTURING: MAINTAINING BULK POWER SYSTEM RELIABILITY 5-6 (2003) [hereinafter ELECTRIC UTILITY RESTRUCTURING].

²² *Id.* at 6.

²³ *Id.* at 8-9.

²⁴ *See id.* at 8-9.

²⁵ ELECTRIC RELIABILITY, *supra* note 13, at 1.

²⁶ *See id.* at 1-3.

²⁷ *See* H.R. CONF. REP. NO. 108-375, at 280-81 (2003).

²⁸ ELECTRIC RELIABILITY, *supra* note 13, at 1.

²⁹ *See id.* at 1-3.

³⁰ *See id.*

ing more transmission lines to be built.³¹ Increased RTO participation could also enhance competition in the electrical industry.³²

With a more robust and reliable grid, we would hopefully have less serious incidents like the power outage in New York. However, it is unclear how much of an impact House Bill 6 will actually have on RTO formation. Furthermore, there is some argument that RTOs will simply be another ineffective mandatory business structure in an already over-regulated industry.³³

This paper will argue, first, that current laws and regulations governing the power industry are outdated, and in order to effectively update them, ownership of power generation assets must be kept separate from ownership of power transmission assets. Furthermore, the failure to update those laws and regulations has made the power grid less reliable, stunted growth of new transmission, and dampened competitive markets. Next, the language contained in House Bill 6 will effectively require the FERC to implement new rules that give incentives to utilities that join RTOs, and these incentives will probably be effective in encouraging utilities to join RTOs. Finally, RTOs will accomplish the purpose of splitting transmission from generation, and thus will aid in fixing the problems of the power industry—though some problems will be fixed more than others. Ultimately, however, incentive-based rates, as contained in House Bill 6, should increase the reliability of and investment in the power grid, and increase competition in the electricity industry.

Part I of this note will give a history of the rules governing the electricity industry—both laws passed by Congress and regulations passed by the FERC—with an eye towards providing enough background information to understand the problems plaguing the industry, and the RTOs proposed to fix those problems. Part II of this note will discuss the legislative history and current status of House Bill 6, the Omnibus Energy Bill, as well as lay out the incentive-based rate provisions that are of particular importance for this note. Part III of this note will analyze the provisions of House Bill 6 in the context of current laws and regulations, and discuss the impact these provisions will have both on RTO formation and the problems facing the power industry.

³¹ See generally *id.*

³² See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 1-3.

³³ See Lawrence J. Spiwak, *You Say ISO, I Say Transco, Let's Call the Whole Thing Off*, PUB. UTIL. FORT., Mar. 15, 1999, at 38.

I. BACKGROUND ON LAW

While the main focus of this note is on the effects of House Bill 6 on participation in RTOs, House Bill 6 builds upon previous legislation and regulations. An understanding of RTOs and their effects cannot be achieved without first understanding the regulations that created them, and the legislation that preceded them.

A. *How it Was Before Regulation?: Energy Companies in the Early 1900s*

Until the very early 1900s, the energy industry in the United States was almost entirely local.³⁴ It was difficult to send power over long distances, so all generators had to be built close to electricity consumers.³⁵ The result was a fragmented market.³⁶

However, as technology was invented that allowed electricity to be transmitted more efficiently over long distances, the energy industry began to consolidate.³⁷ Smaller utilities were bought up by larger holding companies, which were in turn bought up themselves, until by 1932, almost half of the electricity generated in the United States was controlled by only three groups.³⁸ Moreover, these energy groups often controlled much or all of the energy supply in their local area, thus achieving the status of local monopolies.³⁹

The achievement of monopoly status in an area led to a predictable outcome: prices began to rise for consumers, and the reliability of service began to go down.⁴⁰ States began to look into regulating these new monopolies, but most found that they did not have sufficient resources and authority to regulate such large and complex interstate business structures.⁴¹

³⁴ AMY ABEL, CONG. RESEARCH SERV., No. RS20015, ELECTRICITY RESTRUCTURING BACKGROUND: PUBLIC UTILITY HOLDING COMPANY ACT OF 1935 (PUHCA) 1-2 (1999) [hereinafter ELECTRICITY RESTRUCTURING (PUHCA)].

³⁵ *See id.* This was because electricity was then transmitted by direct current (DC), which was reliable and efficient only over short distances. *See id.*

³⁶ *See id.*

³⁷ *See id.* at 2.

³⁸ *Id.*

³⁹ *Id.* "A holding company parent was able to charge its associated utilities exorbitant amounts for services, such as construction of facilities, fuel supply, or billing. Excessive fees charged . . . were passed through to consumers as higher rates . . . Economies of scale were not taken advantage of and the marginal costs . . . were less than average cost. The classic monopoly situation existed." *Id.*

⁴⁰ *See* ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34.

⁴¹ *See id.* at 3.

Finally, when the stock market crashed in 1929, another problem surfaced: the holding companies had very high debt to equity ratios, having taken out huge loans to further their acquisitions of subsidiary utilities.⁴² They could not maintain service on these debts after the crash, and many of the companies went bankrupt, causing even further disruptions to service.⁴³

Rising power rates, bankrupt energy companies and the ineffectiveness of state regulation combined, and so began the first rumblings of federal regulation.

B. *Government Regulation: Energy Laws and the Origins of the FERC*

Energy regulation began, unsurprisingly, not with the private sector but with the government sector. In 1920, Congress passed the Federal Water Power Act.⁴⁴ This legislation, among other things, created the Federal Power Commission (“FPC”), which is the predecessor of the present-day FERC.⁴⁵ However, the FPC was not meant to regulate private sector power, but instead to coordinate federal hydroelectric projects.⁴⁶ Private sector power remained essentially unregulated.

Then in the 1930s, things began to change. It was the time of the Great Depression, and the government’s *laissez faire* attitude slowly dissolved in the face of rising energy prices and increasing consumer discontent with high rates.⁴⁷ Consequently, in 1935, Congress passed the Public Utility Act of 1935, which included two important pieces of energy legislation.⁴⁸ Title I of the Public Utilities Act was the Public Utility Holding Company Act (“PUHCA”)⁴⁹; Title II was the Federal Power Act (“FPA”) of 1935.⁵⁰ These two acts were intended to work in tandem to fill the regulatory vacuum that

⁴² *Id.* at 2.

⁴³ *See id.* at 2.

⁴⁴ Federal Water Power Act, Pub. L. No. 66-280, 41 Stat. 1063 (codified as amended in scattered sections of 16 U.S.C. (1920)).

⁴⁵ FED. ENERGY REGULATORY COMM’N, FERC TIMELINE, at <http://www.ferc.gov/students/whatisferc/timeline.htm#> (last visited Aug. 4, 2004).

⁴⁶ FED. ENERGY REGULATORY COMM’N, HISTORY OF FERC, at <http://www.ferc.gov/students/whatisferc/history.htm> (last visited Aug. 8, 2004).

⁴⁷ *See* ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 1-5.

⁴⁸ *See* AMY ABEL, CONG. RESEARCH SERV., No. 98-419, ENR, ELECTRICITY RESTRUCTURING BACKGROUND: THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978 AND THE ENERGY POLICY ACT OF 1992, 2 (1998) [hereinafter ELECTRICITY RESTRUCTURING (PURPA)].

⁴⁹ Public Utility Holding Company Act of 1935, ch. 687, 49 Stat. 803 (codified as amended at 15 U.S.C. § 79 (2000)).

⁵⁰ Federal Power Act, Pub. L. No. 74-333, 49 Stat. 847 (1935) (codified as amended at 16 USC § 791(a) (2000)).

allowed the abuses of the early 1900s.⁵¹ Other important pieces of legislation included the Public Utility Regulatory Policies Act of 1978, which was aimed at increasing our energy supply,⁵² and the more recent Energy Policy Act of 1992, which was aimed at increasing competition in the electrical industry.⁵³ This note will examine each issue in turn.

1. The Federal Power Act

The FPA was passed as part of the Public Utility Act, and was meant to remedy the above-mentioned problems with electricity conglomerates in the early 1900s.⁵⁴ This legislation greatly expanded the FPC (now FERC)'s regulatory powers with regard to the transportation and sale of natural gas and electricity.⁵⁵ While the FPA has been amended several times, the essential powers it gives the FERC have remained virtually unchanged.⁵⁶

First, the FERC may only regulate the sale and transportation of power that falls within its jurisdiction. The jurisdiction of the FERC, set out in the FPA, is over the transmission or wholesale of energy *in interstate commerce*.⁵⁷ While this phrase standing alone might have been broadly interpreted by the courts, the statute went further and specifically reserved jurisdiction to the states for facilities that generated electricity and transmitted it locally, in intrastate commerce, or consumed it themselves.⁵⁸ The courts interpreted this to mean that Congress wished states to maintain regulatory control of purely state-wide facilities, even if those facilities have some effect on interstate commerce.⁵⁹ The FERC also has only limited jurisdic-

⁵¹ ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 3.

⁵² Public Utility Regulatory Policies Act of 1978, 16 U.S.C. § 2601 (2000).

⁵³ Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2905 (codified as amended at 15 U.S.C. § 79 (2000)).

⁵⁴ ROAD TOWARD RESTRUCTURING, *supra* note 19, at 1-2.

⁵⁵ See FED. ENERGY REGULATORY COMM'N, HISTORY OF FERC, at <http://www.ferc.gov/students/whatisferc/history.htm> (last visited Aug. 8, 2004). The Federal Power Commission ("FPC") was reorganized by Congress into the Federal Energy Regulatory Commission ("FERC") in 1977. *Id.* The FERC kept the vast majority of FPC powers, and the ones it lost are not relevant to this paper. *Id.* For simplicity's sake, from here on out the Commission will be called the FERC regardless of the year to which it is being referred.

⁵⁶ For a discussion on two of the more important laws amending the FPA and PUHCA, see the discussions on PURPA and EPACT, *infra* Part I.B.3-4.

⁵⁷ 16 U.S.C. § 824(b)(1) (2000).

⁵⁸ *Id.*

⁵⁹ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2. While state regulations on intrastate utility activities vary, in practice the most important power they have retained is probably the setting of retail power rates on end consumers (residential, commercial, and industrial). See *id.*

tion over some government operated utilities, such as the Tennessee Valley Authority.⁶⁰

However, within its jurisdictional sphere the FPA assigns the FERC fairly broad powers. The FPA grants the FERC the power to set rates and charges that are collected by energy utility companies that transmit or sell electric energy in interstate commerce.⁶¹ The rates and charges of utility companies under the jurisdiction of the FERC cannot be “unjust and unreasonable” or “unduly discriminatory or preferential,” as determined by the FERC. Such rates and charges are subject to change by the FERC.⁶²

When a utility company wishes to change its rates, it is required to submit a rate schedule to the FERC.⁶³ The FERC then decides if these rates are just and reasonable, using a “myriad of factors” including the characteristics of the customers receiving the energy, the nature of the service being provided to the customers, and other “facts of each case.”⁶⁴ The FERC must either rule upon this proposed rate schedule before it would go into effect, or suspend it from going into effect for up to five months.⁶⁵ If they are not acted on within five months, the new rates go into effect automatically; but the FERC has the power to later revoke the rates and order refunds if they were determined to be unjust or unreasonable.⁶⁶

The FPA is still the statutory backbone for the powers of the FERC. While the FERC issues detailed regulations that specifically govern participants in the power industry within its jurisdiction,⁶⁷ these regulations draw most of their power from the provisions of the FPA that give the FERC the

⁶⁰ See ELECTRIC UTILITY RESTRUCTURING, *supra* note 21, at 18.

⁶¹ 16 U.S.C. § 824(d)-(e) (2000).

⁶² *Id.* As would be expected, the courts have interpreted this and other language defining the authority of the FERC. See, e.g., *Entergy Louisiana, Inc. v. Louisiana Pub. Serv. Comm’n*, 539 U.S. 39, 46-48 (2003) (holding that if the FERC delegates part of its rate approval authority to the utility company, state commissions may not review or overturn the utility company’s rate decisions made under that discretion); *New York v. FERC*, 535 U.S. 1, 28 (2002) (holding that the FERC is within its authority to require public utility companies to transmit competitors’ power on their own lines, on the same terms and prices as given to their own electricity); *Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 962 (1986) (finding that, under the Supremacy Clause, rates set by the FERC within its jurisdiction are binding on, and must be enforced by, state utility commissions); *Atlantic City Electric Company v. FERC*, 329 F.3d 856, 859 (D.C. Cir. 2003) (holding that the FERC cannot prohibit utility companies from withdrawing from an Independent System Operator); *Louisiana Pub. Serv. Comm’n v. FERC*, 184 F.3d 892, 897 (D.C. Cir. 1999) (holding that the FERC has a “duty—not the option—to reform rates” that are not just and reasonable); *E. Tennessee Natural Gas Co. v. FERC*, 863 F.2d 932, 942 (D.C. Cir. 1988) (holding that FERC has the authority in some circumstances to order refunds to be paid if they determine a utility set an unjust or unreasonable rate).

⁶³ 16 U.S.C. § 824(d) (2000).

⁶⁴ *Cent. Louisiana Elec. Co.*, 70 F.E.R.C. 63,015, 1995 WL 76820, *7 (1995).

⁶⁵ 16 U.S.C. § 824(d) (2000).

⁶⁶ *Id.*

⁶⁷ See *infra* Part I.C.

ability to set “just and reasonable” rates on the transmission or sale of energy in interstate commerce.⁶⁸ Other pieces of legislation have also added to the FERC’s ability to govern the power industry; these are examined in more detail later in this section.⁶⁹

2. The Public Utility Holding Company Act of 1935

The Public Utility Holding Company Act (“PUHCA”) was passed as part of the Public Utility Act of 1935,⁷⁰ and was meant to work in concert with its sister legislation, the Federal Power Act (“FPA”).⁷¹ Where the FPA regulated rates and transmission, the PUHCA regulated business structure—again with an eye towards correcting the abuses of the early 1900s.⁷² Around the turn of the century, the business model in the utility industry began to change, from multiple local utilities to large holding companies⁷³ that had bought up controlling interests in multiple local utilities.⁷⁴ These conglomerate companies then used their monopoly power to charge their related utilities large sums of money for services tangentially related to electricity, such as billing.⁷⁵ While these excessive charges would, of course, be passed on to the consumers, there was little the consumers could do without any choice in from whom they purchased their electricity.⁷⁶ Furthermore, it was very difficult for state legislatures to regulate these holding companies, because they had complicated, multilayered business structures, and because they usually operated across multiple states.⁷⁷ In addition, the holding companies were borrowing large amounts of money to finance their acquisitions and had unstably high debt-to-equity ratios.⁷⁸ In 1928, a Federal Trade Commission report described the holding companies as “frequently a menace to the investor or the consumer or both.”⁷⁹

⁶⁸ 16 U.S.C. § 824(d)-(e) (2000); 16 U.S.C. § 824(b)(1) (2000).

⁶⁹ See *infra* Part I.C.

⁷⁰ 15 U.S.C. § 79 (2000).

⁷¹ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 3.

⁷² See *id.*

⁷³ PUHCA defines a holding company as an enterprise that directly or indirectly owns 10% or more of a stock in a public utility company. 15 U.S.C. § 79b(a)(7) (2000).

⁷⁴ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 2.

⁷⁵ See *id.*

⁷⁶ See *id.*

⁷⁷ *Id.* at 3.

⁷⁸ Indeed, many of the holding companies went bankrupt and collapsed after the stock market crash of 1929. *Id.* at 2.

⁷⁹ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 3.

PUHCA tried to correct those problems by freeing utility operating companies from the absentee control of the holding companies.⁸⁰ It did this by granting the Securities and Exchange Commission (“SEC”) authority to oversee the business structure of utility holding companies.⁸¹ Once the SEC had forced the holding companies into a more manageable structure, the way would be open for state regulation of the utility companies.⁸²

Specifically, PUHCA did this in three main ways. First, it required that all public utility holding companies register with the SEC if they or their subsidiaries were engaged in interstate commerce.⁸³ Those holding companies required to register with the SEC were then required to submit certain information to the SEC, including profit and loss statements, balance sheets, information concerning the companies’ business operations, and a description of the company’s management and business structure.⁸⁴ The SEC would then use this information to insure that public utility holding companies were complying with the other portions of PUHCA.⁸⁵

Secondly, PUHCA forcefully simplified the business structures of interstate utility holding companies.⁸⁶ As mentioned, holding companies had previously layered themselves like onions, making it difficult for the states to regulate them.⁸⁷ Under PUHCA, however, holding companies were abolished if they were more than twice removed from their operating utility company.⁸⁸ Furthermore, holding companies were required to eliminate any portion of their holding company system that “unduly or unnecessarily complicate[d] the structure.”⁸⁹ Once these principles were implemented, holding companies became much more manageable for state and federal regulators.⁹⁰

Finally, PUHCA limited each public utility holding company to the operation of a single, integrated public utility system.⁹¹ In practice, the requirement that this single system be “integrated” often has limited public utility holding companies to owning utility operations within a single geo-

⁸⁰ 2 THOMAS LEE HAZEN, *THE LAW OF SECURITIES REGULATION* § 15.1, at 268 (2d ed. 1990).

⁸¹ 15 U.S.C. § 79b(a)(6) (2000).

⁸² HAZEN, *supra* note 80, § 15.1, at 268.

⁸³ 15 U.S.C. § 79d (2000).

⁸⁴ *Id.* § 79e(b) (2000).

⁸⁵ See AARON M. FLYNN ET AL., CONG. RESEARCH SERV., No. RL32133, *FEDERAL MERGER REVIEW AUTHORITIES AND ELECTRIC UTILITY RESTRUCTURING* (2003).

⁸⁶ 15 U.S.C. § 79k(b)(2) (2000).

⁸⁷ See *ELECTRICITY RESTRUCTURING (PUHCA)*, *supra* note 34, at 2-3.

⁸⁸ *Id.* at 3. See also 15 U.S.C. § 79k(b)(2).

⁸⁹ The SEC determines what “unduly complicates” the holding company structure. See 15 U.S.C. § 79k(b)(2) (2000).

⁹⁰ See *ELECTRICITY RESTRUCTURING (PUHCA)*, *supra* note 34, at 6.

⁹¹ 15 U.S.C. § 79k(b)(1) (2000).

graphical area.⁹² However, PUHCA allowed the SEC to make exceptions to this rule.⁹³ The SEC may allow a holding company to operate multiple utility systems if it finds three things: First, if the extra utility systems were to operate on their own, they would be substantially less efficient.⁹⁴ Second, the additional utility systems must be located in the same state as the first system, or in adjoining states, or in a contiguous foreign country.⁹⁵ Third, the combination of these systems must not impair local management, efficient operation, or effectiveness of regulation.⁹⁶

Most commentators believe that PUHCA was successful in its original goal of simplifying the structure of public utility holding companies so that they could be more successfully regulated.⁹⁷ However, despite (or perhaps because of) its past success, PUHCA regulations are often criticized. Some believe that the regulations set out in PUHCA have become less necessary with greater FERC regulation of the power industry.⁹⁸ Furthermore, critics argue that PUHCA reduces investment in the utility industry by making it difficult to create utility holding companies and thus minimize risk in the industry.⁹⁹ Utility holding companies often own multiple utilities in different parts of the country; this diversifies assets.¹⁰⁰ Just as a more diverse stock portfolio is less risky to its owner, more diverse utilities are less risky to its shareholders and thus more attractive to potential investors.¹⁰¹ Because PUHCA discourages these multi-state utility holding companies, it reduces investment. Even the utility holding companies that receive exceptions to PUHCA from the SEC do not escape this problem, because the SEC can revoke these exceptions at any time.¹⁰² This possibility of revocation creates uncertainty for the holding companies and reduces the amount people are willing to invest in them.¹⁰³ Finally, some believe that the tendency of PUHCA to limit investment in and expansion of holding compa-

⁹² See MICHAEL V. SEITZINGER, CONG. RESEARCH SERV., No. RS20952, PUBLIC UTILITY HOLDING COMPANY ACT: MAJOR STATUTORY PROVISIONS AND POSSIBLE REFORM EFFORTS 4 (2002).

⁹³ 15 U.S.C. § 79k(b)(1) (2000).

⁹⁴ *Id.* § 79k(b)(1)(A).

⁹⁵ *Id.* § 79k(b)(1)(B).

⁹⁶ *Id.* § 79k(b)(1)(C).

⁹⁷ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 4. Between 1938 and 1962, 2,419 electric and gas utility companies registered with the SEC under PUHCA. *Id.* Of these, 928 were subject to divestiture of some of their assets, such as utility systems. *Id.*

⁹⁸ See ELECTRIC UTILITY RESTRUCTURING, *supra* note 21, at 25.

⁹⁹ ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 6.

¹⁰⁰ *Id.*

¹⁰¹ See *id.*

¹⁰² See *id.*

¹⁰³ See *id.*

nies might have negative consequences for the eventual construction of large, nation-wide Regional Transmission Organizations.¹⁰⁴

3. The Public Utility Regulatory Policies Act (“PURPA”) of 1978

The Public Utility Regulatory Policies Act (“PURPA”) was passed in 1978 with the main goal of increasing our electrical power production.¹⁰⁵ It did this first by creating a new sort of unregulated power generating entity, known as the Qualifying Facility (“QF”).¹⁰⁶ Next, it mandated that utilities purchase power from these QFs, and changed the rate at which this power would be purchased.¹⁰⁷ In the process of encouraging other non-utility companies to generate power, Congress also inadvertently began the process of introducing competition into the power industry.¹⁰⁸

First, to increase the production of energy in the United States, PURPA created QFs as a new sort of facility exempt from regulation under the earlier FPA and PUHCA statutes.¹⁰⁹ It did this to encourage additional power production in the United States.¹¹⁰ QFs are exclusively generators of electricity that sell that electricity wholesale to other utilities.¹¹¹ Or, put another way, QFs *create* power, but they cannot sell or send that power to end users such as home owners, businesses, etc. PURPA set out two sorts of generators that could be certified as QFs: small power producers and cogenerators.¹¹² While the requirements for each type are slightly different, both are required to meet certain standards of fuel use, efficiency, and reliability to be considered a QF.¹¹³ This virtually unregulated QF option was very attractive to many power producers.¹¹⁴

¹⁰⁴ See ELECTRIC UTILITY RESTRUCTURING, *supra* note 21, at 25.

¹⁰⁵ ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2. This was done in order to allay certain national security concerns resulting from the oil embargos against the United States in the 1970s. See *id.*

¹⁰⁶ 16 U.S.C. § 824a-3 (2000); see also ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 2.

¹⁰⁷ 16 U.S.C. § 824a-3(a), (d) (2000); see also ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 2-3.

¹⁰⁸ See ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 3-4, 6; see also ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3.

¹⁰⁹ 16 U.S.C. § 824a-3(e)(1) (2000).

¹¹⁰ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2.

¹¹¹ See 16 U.S.C. § 796(17)(C), (18)(B)(2) (2000).

¹¹² *Id.* § 824a-3(a) (2000).

¹¹³ *Id.* § 796 (2000). “Small power production facility[ies]” are required to 1) run off of renewable fuel sources, such as solar, wind, waste, or geothermal power and 2) “meet standards set by the FERC for fuel use, fuel efficiency, and reliability.” *Id.* Furthermore, such power producers cannot be owned by anyone engaged in power production by non-QF generators (such as utility companies). *Id.* § 796(17)(c)(ii). “Cogenerators” are required to 1) produce both electricity and some secondary energy product, such as steam or heat, that can be used for industrial or commercial heating and cooling pur-

Next, PURPA required that utility companies offer to purchase the power produced by QFs; utility companies had no choice in the matter.¹¹⁵ PURPA also set the amount the utility company must pay for the QF's power at the amount of money it would have taken the utility company to generate the power on its own.¹¹⁶ This is a concept known as "avoided cost," and it is different from the normal regulatory policy of pricing energy based on how much it cost the generator to produce it.¹¹⁷ In other words, in theory, PURPA awarded the QFs as profit the difference between the amount it cost the QF to produce the electricity, and the amount it *would have cost* the (presumably less efficient) utility company to produce the electricity.¹¹⁸

Finally, in attempting to increase the amount and efficiency of power by creating QFs, Congress inadvertently opened the door for competition in the energy market.¹¹⁹ Prior to PURPA, utility companies were integrated monopolies; they generated their own power, and then transmitted it on

poses; and 2) meet standards set by the FERC as to minimum size, fuel use, and fuel efficiency. *Id.* § 796(18)(A)-(B)(i). Furthermore, like small power producers, cogenerators may not be owned by anyone engaged in non-QF power production. *Id.* § 796(18)(B)(ii).

¹¹⁴ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2-3. In addition to the benefits offered by PURPA (exemption from FPA and PUHCA constraints), there were also benefits offered to QFs under another more minor law, the Fuel Use Act of 1978. *Id.* The Fuel Use Act forbade utility companies from using natural gas to create new generating capacity; however, QFs could use natural gas if they wished to do so. *Id.* Combined with new technology that made efficient use of natural gas to create power, QFs received a large advantage over normal utility companies, and many QFs entered the market in a short time. *Id.* The Fuel Use Act, however, was repealed only nine years after it was enacted, in 1987. *Id.*

¹¹⁵ 16 U.S.C. § 824a-3(b) (2000). See also ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2; FRED SISSINE, CONG. RESEARCH SERV., No. RS20270, RENEWABLE ENERGY AND ELECTRICITY RESTRUCTURING 2 (1999). The decision to force utility companies to purchase power from QFs was controversial, and some utility companies contended that it was a taking without just compensation in violation of the Fifth Amendment of the Constitution. *Id.* However, the Kansas Supreme Court ruled against the utility companies, stating that these forced purchases were not takings so long as the utility companies were permitted to sell the power for profit to their retail energy customers, and the U.S. Supreme Court dismissed the case on appeal. See *Kan. City Power & Light Co. v. State Corp. Comm'n.*, 238 Kan. 842, 848 (1986), *appeal dismissed*, 479 U.S. 801 (1986).

¹¹⁶ 16 U.S.C. § 824a-3(d) (2000).

¹¹⁷ See ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 2-3.

¹¹⁸ See generally *id.* In practice, however, while the concept of avoided cost is defined by PURPA, state regulators have wide latitude in what procedures are used to discover this avoided cost value. *Id.* Different states use different procedures, and thus often come up with widely varying numbers for avoided costs. *Id.* Some states even use auction systems to determine avoided costs, in which QFs bid to provide utilities with the cheapest power. *Id.* While this auction system is certainly more competitive, it does not seem to discover avoided cost at all, but instead discovers something closer to the QFs' marginal cost of production. See *id.*

¹¹⁹ See *id.* at 3-4; see also ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3.

their own grid and sold it to their own end users.¹²⁰ However, PURPA began to de-link the generation of power from its transportation and sale by encouraging small, non-utility QF generators to enter the market, then required the monopoly utilities to purchase the power the QFs produced.¹²¹ As the share of U.S. power produced by QFs increased,¹²² the view of utility companies as natural monopolies began to waiver.¹²³ QFs were relatively cheap and easy to bring online; so at least in the generation portion of the power industry, new and efficient technology seemed to be eating away at the utilities' natural monopoly status.¹²⁴ So it was that regulators began to consider that a competitive model might work better in the utility industry than the regulated monopoly model; such thinking led to the passage of the Energy Policy Act ("EPACT") in 1992, and the Regional Transmission Organizations of today.¹²⁵

4. Passage of the Energy Policy Act of 1992

EPACT was passed in 1992 with the goal, in part, of increasing competition in the electrical industry.¹²⁶ Where PURPA began to open the door to competition in the electrical industry by creating QFs, EPACT threw the door wide open by creating another new sort of unregulated facility—the Exempt Wholesale Generator ("EWG").¹²⁷ EPACT also contained provisions to ensure that these new EWG facilities could transmit their power to whatever entity purchased it.¹²⁸ The end result of this legislation was a large increase in competition in the generation sector of the public power industry.¹²⁹

First, EPACT created EWGs; these are power generating facilities that, much like QFs, are exempt from regulation under PUHCA and the FPA.¹³⁰ To qualify as an EWG, a power-generating facility must meet several criteria, the most important of which is that it must sell its power only

¹²⁰ See *supra* Part I.B; see also ROAD TOWARD RESTRUCTURING, *supra* note 19, at 1-2.

¹²¹ See ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48.

¹²² As of 1996, about 8% of United States power is generated by QFs. See *id.* at 3.

¹²³ *Id.* at 3.

¹²⁴ See *id.* at 3-4.

¹²⁵ See *id.*

¹²⁶ Energy Policy Act of 1992, Pub. L. No. 102-486, § 711, 106 Stat. 2776 (1992) (codified as amended in scattered sections throughout 46 U.S.C., 42 U.S.C., 30 U.S.C., 26 U.S.C., 25 U.S.C., 16 U.S.C., and 15 U.S.C.); see also ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 6.

¹²⁷ 15 U.S.C. § 79z-5a(a)(1) (2000); see also ELECTRIC RELIABILITY, *supra* note 13, at 3.

¹²⁸ 16 U.S.C. § 824k(a), (c) (2000).

¹²⁹ See ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 4-6.

¹³⁰ See 15 U.S.C. § 79z-5a(e) (2000).

at wholesale to other utility companies (not to end users).¹³¹ Unlike the QFs created by PURPA, EWGs could be large, they could operate on fuels other than renewable fuels, and they could sell their power for whatever price they chose (so long as they sold it at wholesale).¹³² Furthermore, because the EWGs were exempt from PUHCA, utility holding companies and other firms could build and own EWGs without fear of running afoul of PUHCA's restrictions on business structures.¹³³ These exemptions lead to more investment in power generation facilities.¹³⁴

After creating these independent generating facilities, Congress also had to provide for how they would transmit their energy; a typical EWG would probably not own any transmission lines.¹³⁵ EPACT accomplished this by allowing the FERC to issue orders requiring a utility company to transmit power generated by an EWG.¹³⁶ The transmitting utility company then charges the EWG based upon the cost to the utility company in transporting the power.¹³⁷ The FERC expanded on these guidelines in Orders 888 and 889, but the essential effect of the statute was to ensure that EWGs always had a way to send their generated power to their customers.¹³⁸

Finally, the effect of EPACT was dramatic: It resulted in a large increase in competition in the electrical industry.¹³⁹ Competition in the electrical industry, if feasible, was the preferred market structure from a regulatory standpoint because of the greater flexibility and efficiency afforded by

¹³¹ See *id.* § 79z-5a(a)(2). The other requirements are rather lax, and the FERC allows companies to simply file affidavits swearing that they meet them. *Id.* Those requirements include filing a description of the facility, reporting any lease arrangements electric utilities, and showing compliance with any additional requirements put on the nascent EWG by state power commissions. See ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 6.

¹³² See generally ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48.

¹³³ See *id.* at 4.

¹³⁴ See *id.*

¹³⁵ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3. It is likely that the transmission provisions in EPACT were motivated by a fear that, absent a *requirement* that the utility companies purchase the power produced by the EWGs (as exists with the QFs created under PURPA), public utilities might use their control over the transmission lines to keep the EWGs from selling their power to other utilities, thus putting the EWGs out of business. See ELECTRIC RELIABILITY, *supra* note 13, at 3; ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48; ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3.

¹³⁶ 16 U.S.C. § 824j(a), k(a)-(c) (2000).

¹³⁷ *Id.* § 824k(a). The price the utility company can charge the EWG includes, in addition to short term costs, some longer term investment costs such as for investment in enlarging the utility company's transmission grid. See *id.*

¹³⁸ See *infra* Part I.C.1 for a discussion of Orders 888 and 889.

¹³⁹ See ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 4 (“[EPACT] increased competition in the electric generating sector By creating new options for utilities and regulations to meet electricity demand, the effect of EPACT on the energy supply system is potentially more far reaching than PURPA's introduction of cogenerators and small power producers to the electricity supply mix.”).

robust markets.¹⁴⁰ In the early 1900s, however, competition had not seemed feasible.¹⁴¹ But after the passage of PURPA and the creation of QFs, regulators realized that modern technology made entrance into the power generation sector of the industry relatively easy.¹⁴² Generation, at least, was no longer a natural monopoly, and competition seemed more feasible.¹⁴³ EPACT was based upon this view.¹⁴⁴ By encouraging the creation of new, unregulated power-generating facilities that could sell their power only to utilities (not to end users), EPACT helped to create a robust wholesale market for energy.¹⁴⁵

However, in some ways it was almost too successful: investment in new generation facilities is now growing much faster than investment in new transmission lines.¹⁴⁶ Growth in demand for power has also outpaced growth in transmission capacity.¹⁴⁷ A power grid originally built to handle the local transmission of power from a monopoly's power station to its nearby retail customers is now being used as the crossroads for an international wholesale power market.¹⁴⁸ Just as dirt roads that once worked for horse and buggy were insufficient to handle the newly-created automobile, our current power grid is also insufficient for its new task of carrying wholesale electricity throughout the country.¹⁴⁹ These concerns regarding transmission and reliability were among the main reasons the FERC issued Orders 888, 889, and 2000, and ultimately created the RTO.¹⁵⁰

C. *FERC Orders and the Creation of Regional Transmission Organizations*

While the Federal Power Act ("FPA") and the other above-mentioned laws are the backbone of energy regulation, they are not the whole picture. These laws set out the broad guidelines of what must be done, and leave the

¹⁴⁰ See generally ELECTRIC RELIABILITY, *supra* note 13.

¹⁴¹ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 1.

¹⁴² See *id.*

¹⁴³ See generally ELECTRICITY RESTRUCTURING (PURPA), *supra* note 48, at 3.

¹⁴⁴ See generally *id.*

¹⁴⁵ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3.

¹⁴⁶ See ELECTRIC RELIABILITY, *supra* note 13, at 1. This is not to say that generation capacity is necessarily growing quickly enough, however, for there are still generation shortages in some areas of the country; it is just growing more quickly than transmission. See *id.*

¹⁴⁷ *Id.* at 4. Electricity demand has been growing at 2% to 3% per year. *Id.* By contrast, additions to the transmission system have grown at only .7% per year. *Id.* As might be expected, this has led to congestion in the power lines of many areas of the United States. *Id.*

¹⁴⁸ See ELECTRIC RELIABILITY, *supra* note 13, at 1.

¹⁴⁹ See generally *id.*

¹⁵⁰ See *id.* at 3, 6-7.

details to the FERC.¹⁵¹ Thus, many of the most important rules regarding the power industry are found not in statutes, but in FERC regulations.

As discussed, EPACT granted the FERC broader authority over power transmission issues to enhance competition in the industry by requiring utilities to transport power generated by the new EWG facilities.¹⁵² Pursuant to this authority and the authority given to it in the original FPA, the FERC promulgated three orders important for the purposes of this note: Orders 888, 889, and 2000.¹⁵³ Generally speaking, these three orders were meant to increase competition in the industry by eliminating some of the transmission issues EPACT left unsettled.¹⁵⁴ Each will be examined in turn.

1. Order 888: Transmission Access, Unbundling, and the Creation of ISOs

Order 888, also known as the “Open Access Rule,” was promulgated by the FERC in 1996.¹⁵⁵ Order 888, combined with its companion Order 889, were intended to eliminate “undue discrimination” in the ability of generators to access transmission lines owned by monopoly utilities.¹⁵⁶ Order 888 specifically did three main things: First, it set out a system for pricing transmission.¹⁵⁷ Second, it forced utility companies to separate their generation and transmission functions.¹⁵⁸ Finally, it encouraged utility companies to join new conglomerate organizations, called Independent Systems Operators, to help coordinate transmission.¹⁵⁹

First, Order 888 set out rules for the enforcement of the FPA and EPACT’s mandatory transmission requirements.¹⁶⁰ All public utility companies were required to set a “Non-discriminatory Open Access Transmis-

¹⁵¹ See 15 U.S.C. § 79 (2000); 16 U.S.C. § 791(a) (2000); 16 U.S.C. § 2601 (2000).

¹⁵² See discussion *supra* Part I.B.

¹⁵³ F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285; F.E.R.C. Order 889, Open Access Same-Time Information Systems, 75 F.E.R.C. 61, 078. Interestingly, the FERC relied mainly upon its authority under the original FPA to fix “unduly discriminatory or preferential” rates, as opposed to its new powers under EPACT to order transmission. See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 98-120.

¹⁵⁴ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 4.

¹⁵⁵ F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080.

¹⁵⁶ *Id.* at 1.

¹⁵⁷ See *id.* The FERC had required utilities to give power generators the benefit of transmission since the passage of EPACT in 1992. However, prior to Order 888, the FERC had mainly only required certain specific sorts of transmission, and had done so on a case by case basis. *Id.* at 33-35.

¹⁵⁸ See *id.* at 277-88.

¹⁵⁹ See *id.*

¹⁶⁰ See Conservation of Power and Water Resources, 18 C.F.R. § 35.28(c)(1)(i) (2003).

sion Tariff” within sixty days of the publishing of Order 888.¹⁶¹ This tariff is essentially a price for the use of the utility company’s transmission lines. The system for setting this price is complicated,¹⁶² but the general principle behind the rule is simple: A transmission line owner must set prices and provide services at a comparable level to what he would provide for himself.¹⁶³ Furthermore, if a utility company posts such a tariff for the use of its transmission lines, and the FERC approves it, any generator asking the FERC to issue an order for transmission against that company (under EPACT) bears the burden of proof that the service of the utility company is inadequate.¹⁶⁴ In other words, the FERC turned the vision of EPACT on its head: Instead of ordering transmission in individual cases, the FERC set out general rules for transmission and a very high bar for particular orders.¹⁶⁵

Next, Order 888 required utility companies to “functionally unbundle”—meaning separate—their power generation assets from their power transmission assets.¹⁶⁶ The FERC’s requirements for functional bundling, in sum, attempted to put a utility company’s own power generating facility on a level playing field with other power generation facilities as to the use of the utility company’s own transmission lines.¹⁶⁷ In practice, this required utility companies that owned both generation and transmission assets to

¹⁶¹ See *id.* Those utility companies that have given up control of their transmission lines to an Independent System Operator, discussed *infra* in this section, could submit to the FERC only one tariff for their entire power pool, as opposed to one rate for each utility company. See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080.

¹⁶² See generally F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 286-390 (price setting information).

¹⁶³ See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 136; See also ROAD TOWARD RESTRUCTURING, *supra* note 19, at 4. This concept was aided by functional unbundling of generation and transmission. See discussion *infra*, this section.

¹⁶⁴ See 18 C.F.R. § 35.28(e)(1)(ii).

¹⁶⁵ The FERC did this, in part, by relying on its authority over “unduly discriminatory or preferential” rates under the original FPA, on the theory that utility companies were using their monopoly power to discriminate against transmissions sent in interstate commerce by EWG generators. See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 98-120. The FERC’s authority under EPACT was referenced as well, but it was secondary to the powers granted under the FPA. See *id.*

¹⁶⁶ See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 57-61. After the FERC required utilities to functionally unbundle their power, a group of states and utility companies challenged the FERC’s authority to continue to regulate the unbundled power. See *New York et. al. v. FERC*, 535 U.S. 1 (2002). They argued that since the power transactions were now unbundled, most transactions were retail in nature, and thus under the FPA were left up to the states to regulate. *Id.* at 15. The Supreme Court, however, disagreed, ruling that the FERC had jurisdiction even over unbundled power. *Id.* at 5.

¹⁶⁷ See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 57-61. Specifically, function unbundling requires a utility company to do the following: 1. Take transmission services under the same open access tariff as other power generators; 2. Separate rates charged for wholesale generation and transmission; 3. Receive information from the same information network as other generation facilities when buying or selling (and thus transmitting) power. *Id.* at 57.

separate them by something akin to a “Chinese wall”; the two portions of the business must keep separate books, keep separate records, and be charged the same prices for transmission as other power generators.¹⁶⁸ The FERC viewed this functional unbundling of generation and transmission as necessary to accomplish the purpose of non-discriminatory open access tariffs, because without it, utility companies were likely to give preferential treatment to their own power generation facilities.¹⁶⁹

Finally, to better coordinate power transmission in an area of the power grid, the FERC recommended that utility companies join a new sort of cooperative organization: the Independent Systems Operator (“ISO”).¹⁷⁰ The ISO is a non-profit organization that controls the power transmission lines in a given geographic area.¹⁷¹ Utility companies that join an ISO give up control of their transmission lines to the ISO.¹⁷² The ISO then coordinates the control of its piece of the grid in an efficient manner.¹⁷³ In theory, this can help to eliminate many of the problems that result from competing power generators and utility companies all attempting to simultaneously send power along one another’s transmission lines under Order 888’s open access tariff.¹⁷⁴

¹⁶⁸ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 4.

¹⁶⁹ See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 57-61.

¹⁷⁰ See generally F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 277-288.

¹⁷¹ See Gregory S. Vassell, *ISO v. Transco: The Debate Goes On*, PUB. UTIL. FORT., Sept. 5, 1997, at 30.

¹⁷² See *id.*

¹⁷³ See *id.* at 31.

¹⁷⁴ See generally ELECTRIC RELIABILITY, *supra* note 13, at 6-12. These problems include congestion, “pancaking,” “loop flow,” and the “seams issue.” *Id.* at 1. Congestion is self-explanatory; it results when too much power attempts to travel through a transmission line at any given point in time. *Id.* It often happens at so called “bottlenecks”—areas of the grid where there is not enough transmission to carry large quantities of wholesale electricity from one state or area to another. *Id.* There are many of these “bottlenecks” in the United States, in part because our power grid was not created to be interconnected, but instead to serve vertically integrated monopolies. See *id.* “Pancaking” is an industry term for being charged multiple open access tariffs when power unnecessarily travels back and forth through areas of the grid owned by different utility companies while on its path to its final destination. The power-sending generator then gets charged multiple, “pancaked” rates which would have been much lower had the power traveled a different path. See Bruce W. Radford, *ISO Growing Pains*, PUB. UTIL. FORT., Mar. 1, 2000, at 4. “Loop flow” is an industry term for the problems caused neighboring utility companies when electricity travels near to their grids along its transmission path. Charles J. Cicchetti & Colin M. Long, *Transmission Products and Pricing: Hidden Agendas in the ISO/Transco Debate*, PUB. UTIL. FORT., June 15, 1999, at 38. Because electricity inherently follows the path of least resistance, its exact path along a portion of the power grid cannot be easily determined. *Id.* On occasion, it will take unexpected “short cuts” through neighboring power grids. *Id.* This sudden influx of unexpected electricity can cause the neighboring utility problems, and tie up their transmission lines without compensation from the sending generator. See *id.* The “seams issue” is an industry phrase referring to the problems created by the patchwork nature of our power grid. See Marija Ilic & Leonard S. Hyman, *Don’t Rush the Seamstress: Second Thoughts on the Marriage of the North-East Grids*, PUB. UTIL. FORT., Sept. 1,

The FERC set out several guidelines for these recommended conglomerates.¹⁷⁵ In general, they required the ISO to operate the transmission lines in an area in an open, fair, efficient, and non-discriminatory manner; they also required the ISO to assume responsibility for the reliability of the portion of the power grid that it controlled.¹⁷⁶ These guidelines would later become even more important, as they are very similar to the guidelines set out for Regional Transmission Organizations.¹⁷⁷

2. Order 889: Transmission Information Systems

Order 889 was also promulgated in 1996, on the same day as its sister Order 888.¹⁷⁸ Order 889 was meant to work in concert with Order 888 by providing information to generators about the transmission network.¹⁷⁹ It did this by creating the Open Access Same-time Information System (“OASIS”).¹⁸⁰ OASIS is an electronic network that provides those purchasing, supplying, or transporting energy with real-time information regarding available transmission capacity and prices.¹⁸¹

Utility companies that own transmission assets are required to submit certain information to the OASIS system.¹⁸² This information amounts to the same data used by utility company employees in the sale or purchase of

2001, at 28. Prior to energy restructuring with PURPA and EPACT, power wasn’t shipped out of state very often—again, the grid was built to serve a system based on vertical monopolies, not horizontal competition. *Id.* Thus, the different sections of grid often have very few transmission lines between them. *Id.* This often makes it difficult to send large wholesale power transactions back and forth across these “seams.” *See id.*

¹⁷⁵ *See* F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 277-288.

¹⁷⁶ *See id.* There were eleven total ISO guidelines. *See id.* They can be summarized as follows: ISOs should 1) Be structured in a fair and non-discriminatory manner. *Id.* at 280. 2) Have strict conflict of interest standards. *Id.* at 280-81. 3) Provide open access to the grid and eliminate “pancaked” rates. *Id.* at 280. 4) Ensure short-term reliability of the power grid. *Id.* at 282. 5) Have control over transmission in its region. *Id.* at 283. 6) Promote efficient energy trading and grid use. *Id.* at 283. 7) Have an efficient management and administration structure. *Id.* at 283-84. 8) Promote efficient use of and investment in generation, transmission, and ancillary services. *Id.* at 284-85. 9) Make transmission information available electronically. *Id.* at 286. 10) Coordinate with neighboring transmission control areas. *Id.* at 286. 11) Establish an Alternative Dispute Resolution system. *Id.* at 286.

¹⁷⁷ *See* discussion *infra* Part I.C.3.

¹⁷⁸ F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 8.

¹⁷⁹ *Id.*

¹⁸⁰ *See* 18 CFR §§ 37.1, 37.8 (2003).

¹⁸¹ *See* F.E.R.C. Order 889, Open Access Same-Time Information Systems, 75 F.E.R.C. 61, 078, at 1.

¹⁸² *See* 18 CFR §§ 37.5, 37.6 (2003).

electricity.¹⁸³ The FERC considered this information system a necessary part of creating a system of open access to transmission at non-discriminatory rates.¹⁸⁴ Combined with functional unbundling, this in theory results in a system where the generation portion of a utility company receives the same OASIS information on the utility company's transmission as any other generation plant.¹⁸⁵

3. Order 2000: The Creation of Regional Transmission Organizations

The FERC quickly recognized that, even after Orders 888 and 889 were issued, problems still remained in the transmission industry.¹⁸⁶ Investment in the construction of transmission, though sorely needed, was still quite low.¹⁸⁷ Discrimination by utilities against competing generators, the bane of Order 888, was still somewhat common.¹⁸⁸ So called "seams" in the power grid still existed, where individual utility companies and small ISOs had not built up transmission lines interconnecting their regions of the grid.¹⁸⁹ Also, externalities still existed where transmission of power along certain paths could invade the transmission lines of other utilities.¹⁹⁰ Finally, due to the tendency of power to follow the path of least resistance, it often had to be routed through multiple areas of the grid controlled by different utility companies, thus being charged multiple tariffs for one transmission.¹⁹¹

¹⁸³ See F.E.R.C. Order 889, Open Access Same-Time Information Systems, 75 F.E.R.C. 61,078, at 16.

¹⁸⁴ See *id.* at 16.

¹⁸⁵ See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61,080, at 57-61. However, there may also be negative consequences for generators to the Oasis system; posting such detailed price information will make it easier for transmission companies, especially Regional Transmission Organizations, to tacitly fix prices among themselves. See Spiwak, *supra* note 33, at 46.

¹⁸⁶ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 2.

¹⁸⁷ See ELECTRIC RELIABILITY, *supra* note 13, at 4. This was due, in part, to certain problems with the pricing model of the open access tariff that made it difficult for utilities to recover their fixed costs, i.e., the costs of investing in new capital such as new transmission lines. See Spiwak, *supra* note 33, at 47.

¹⁸⁸ See AMY ABEL, CONG. RESEARCH SERV., No. RS21407, FEDERAL ENERGY REGULATORY COMMISSION'S STANDARD MARKET DESIGN ACTIVITIES 2 (2003) [hereinafter STANDARD MARKET DESIGN ACTIVITIES].

¹⁸⁹ See Ilic & Hyman, *supra* note 174, at 28; see also discussion of "seams," *supra* note 174.

¹⁹⁰ See Cicchetti & Long, *supra* note 174, at 38. See also discussion of "loop flow," *supra* note 174.

¹⁹¹ See Radford, *supra* note 174, at 4; see also discussion of "pancaking," *supra* note 174.

The FERC and many commentators felt that the best solution to these problems was some sort of regional control for the power grid.¹⁹² The ISOs recommendations in Order 888 were a step in that direction. However, ISOs were voluntary, and many utility companies were not moving quickly to join them.¹⁹³ The FERC thus felt more was needed in order to ensure open and un-discriminatory access to the transmission system.¹⁹⁴

Order 2000 was issued in late 1999 to meet those perceived needs.¹⁹⁵ It created the Regional Transmission Organization (“RTO”), which was an organization, independent of any generation assets, set up in control of a large, multi-state section of the power grid.¹⁹⁶ In other words, it was something of a super-ISO. Utility companies that owned, controlled, or operated transmission assets were required to either join an RTO, or justify to the FERC their reasons for not joining one.¹⁹⁷ There were also some hints that these RTOs would eventually be mandatory, and/or receive special regulatory benefits.¹⁹⁸ The FERC did not choose a specific model for the RTOs, but instead set out a list of four minimum characteristics, and eight minimum functions.¹⁹⁹ Any organization that meets these requirements can qualify as an RTO.²⁰⁰

As mentioned, to qualify as an RTO, the new entity must meet four minimum characteristics.²⁰¹ First, the potential RTO must be independent

¹⁹² See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 3. In Order 2000, the FERC not only asserted that many of the above problems would be aided by RTOs, but also that they would result in an overall savings of over 5 billion dollars per year to industry members and consumers. See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 94.

¹⁹³ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3-5.

¹⁹⁴ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 14.

¹⁹⁵ See generally F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285; see also 18 CFR § 35.34 (2004).

¹⁹⁶ See generally F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285; see also ROAD TOWARD RESTRUCTURING, *supra* note 19, at 3-9.

¹⁹⁷ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 7.

¹⁹⁸ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 4 (“Our objective is for all transmission-owning entities in the Nation, including non-public utility entities, to place their transmission facilities under the control of appropriate RTOs in a timely manner [RTOs will have] an opportunity for non-monetary regulatory benefits If the industry fails to form RTOs under this approach, the Commission will reconsider what further regulatory steps are in the public interest.”).

¹⁹⁹ See 18 C.F.R. § 35.34(b)(1) (2004). However, the FERC is planning to make some suggestions on business models (or “standard market design”) in a future order. See STANDARD MARKET DESIGN ACTIVITIES, *supra* note 188, at 2-3.

²⁰⁰ See 18 C.F.R. § 35.34(b)(1) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 5-6.

²⁰¹ See 18 C.F.R. § 35.34(j) (2004).

from the market participants with which it deals.²⁰² Second, the RTO must be large enough and made up of enough regional participants that it can perform its minimum functions effectively for its section of the grid.²⁰³ Third, the RTO must have operational authority over all transmission lines in its area of control.²⁰⁴ Finally, the RTO must have exclusive authority to maintain short-term reliability in its area of the power grid.²⁰⁵

Furthermore, to qualify as an RTO, the new entity must perform eight minimum functions.²⁰⁶ First, the RTO must set tariffs for transmission in its area, and design those tariffs in a manner to provide efficient use of, and non-discriminatory access to, its section of the grid.²⁰⁷ Second, RTOs must ensure that power congestion in transmission lines under their control is managed; the RTO is given some pricing flexibility to better accomplish that function.²⁰⁸ Third, RTOs must propose and implement solutions to the so-called “loop flow” problems that result when energy invades a neighboring portion of a power grid.²⁰⁹ Fourth, RTOs must supply certain secondary

²⁰² See 18 C.F.R. § 35.34(j)(1) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 152-53. The three specific requirements for independence set out by the FERC include the following: 1) Its employees and directors must not have any financial interest in any market participants; 2) It must have a decision-making process independent of any market participant; 3) It must have exclusive and independent authority to file changes to the transmission tariff. See *id.*

²⁰³ See 18 C.F.R. § 35.34(j)(2) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 238. The FERC declined to say how large was “large enough” for an RTO to qualify under this characteristic, but stated that it would depend on a list of factors including contiguousness, useful regional and transmission area boundaries, recognized trading patterns, and several others. See *id.*

²⁰⁴ See 18 C.F.R. § 35.34(j)(3) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 267. This must include the authority to operate transmission facilities turned over to the RTO, as well as security coordination within the control area. See *id.* at 267-68.

²⁰⁵ See 18 C.F.R. § 35.34(j)(4) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 282. The FERC identified four basic short-term reliability functions of an RTO: 1) Authority over power-interchange schedules; 2) Authority to order redispatch of generators connected to its area of the grid; 3) Authority to approve or disapprove scheduled outages of transmission facilities; 4) An RTO must report to the FERC if a state power commission is hindering its ability to provide efficient and non-discriminatory service. See *id.* at 282-83.

²⁰⁶ See 18 C.F.R. § 35.34(k) (2004).

²⁰⁷ See 18 C.F.R. § 35.34(k)(1) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 324.

²⁰⁸ See 18 C.F.R. § 35.34(k)(2) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 332; discussion of “congestion” *supra* note 174. The RTO may either perform the function of congestion management itself, or delegate it to another neutral body. See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 332.

²⁰⁹ See 18 C.F.R. § 35.34(k)(3) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 386; discussion of “loop flow” *supra* note 174.

services necessary to support the power grid and an energy market.²¹⁰ Fifth, RTOs must be responsible for the OASIS information system, and the calculation of average transmission capacity.²¹¹ Sixth, RTOs must be responsible for monitoring the energy markets they deal with, and providing reports on market failures and abuses to the FERC.²¹² Seventh, RTOs must be responsible for the planning and expansion of their portion of the power grid to meet current and future transmission needs.²¹³ Finally, RTOs are responsible for coordinating with neighboring electricity markets, including other RTOs, to create a more open and efficient energy market.²¹⁴

While the FERC did not specifically choose a business model for RTOs, the industry has narrowed it down. There are two basic sorts: The first is the non-profit ISO model, where the ISO operates but does not own its section of the power grid; the second is the for-profit "transco" model, where one company combines ownership and operation of the power grid.²¹⁵ While the ISO model has been tested previously, having evolved in 1996 under Order 888, the transco model is newer territory. It is debated whether the transco's profit motive will enable it to be a more competitive manager of the power grid than its non-profit ISO cousin, or simply make the transco more likely to exert monopoly power over its section of the power grid.²¹⁶

As of late 2003, the FERC has granted RTO status to three entities: the Midwest Independent Transmission System Operator ("MISO"), RTO

²¹⁰ See 18 C.F.R. § 35.34(k)(4) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 393.

²¹¹ See 18 C.F.R. § 35.34(k)(5) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 426.

²¹² See 18 C.F.R. § 35.34(k)(6) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 435. Specifically, RTOs are required to: 1) monitor the transmission portion of the market; 2) monitor the ancillary services and bulk power markets; 3) assess how the RTO's market and other energy markets interact with one another; 4) provide reports and specific suggestions on all of these things to the FERC. See *id.*

²¹³ See 18 C.F.R. § 35.34(k)(7) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 466.

²¹⁴ See 18 C.F.R. § 35.34(k)(8) (2004); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 492.

²¹⁵ See William W. Hogan, *The RTO NOPR: No Mandate, but a Plan that Works*, PUB. UTIL. FORT., July 1, 1999, at 19. There are two more complicated sub-models that are related to these basic models. See *id.* at 21. They include the following: 1) The "gridco" model, where a company owns the grid but does not operate it, instead working with an ISO that controls the grid, and 2) The ISO/PX model, where an ISO operates the grid, but works with a separate Power Exchange ("PX") company that handles market operations. *Id.* Additionally, there have been some proposals for for-profit ISOs, and non-profit transcos. See *id.*

²¹⁶ See Robert J. Michaels, *ISO or Transco? It's Not the Profit, but Who Gets the Reward*, PUB. UTIL. FORT., Aug. 1, 1999, at 52.

West, and PJM.²¹⁷ It has also given conditional approval to two more RTOs: SeTrans, and WestConnect.²¹⁸ However, some of the remaining areas are reluctant to voluntarily join RTOs, in part due to lack of incentives to do so.²¹⁹ To this end, the FERC has requested authority from Congress to give certain regulatory incentives to RTOs, including higher rates of return on transmission.²²⁰

II. DISCUSSION OF HOUSE BILL 6, THE OMNIBUS ENERGY BILL

While the FERC has struggled to create a more coherent energy policy in the United States, so too has Congress. For the five-to-six years, there has been an understanding in the House and Senate that our nation's energy laws need to be updated.²²¹ To that end, several comprehensive energy bills have passed through various phases of the legislative process, culminating in the most recent bill, House Bill 6.²²² The provisions of the past bills will be covered briefly below.²²³ The provisions of the current legislation pending before Congress will be considered in more depth, as will the provision specifically pertaining to transmission rates.²²⁴

A. *Omnibus Energy Legislation in Previous Congresses*

Energy reform legislation was introduced in both the 106th and 107th Congresses.²²⁵ There were multiple “omnibus” energy bills—in other words, legislation including multiple energy issues—introduced in the 106th Congress.²²⁶ However, the legislation of the 106th Congress concen-

²¹⁷ ROAD TOWARD RESTRUCTURING, *supra* note 19, at 5.

²¹⁸ *Id.*

²¹⁹ *See* Spiwak, *supra* note 33, at 38.

²²⁰ *See* ELECTRIC RELIABILITY, *supra* note 13, at 6-7.

²²¹ *See generally* ROAD TOWARD RESTRUCTURING, *supra* note 19.

²²² *See generally* LARRY PARKER & AMY ABEL, CONG. RESEARCH SERV., No. RL30087, ELECTRICITY RESTRUCTURING: COMPARISON OF COMPREHENSIVE BILLS (2000) (describing energy legislation in the 106th Congress) [hereinafter ELECTRICITY RESTRUCTURING 106TH CONGRESS]; AMY ABEL, CONG. RESEARCH SERV., No. RL31210, ELECTRIC UTILITY RESTRUCTURING LEGISLATION IN THE 107TH CONGRESS (2002) (describing energy legislation in the 107th Congress) [hereinafter ELECTRICITY RESTRUCTURING 107TH CONGRESS]; H.R. CONF. REP. NO. 108-375 (2003) (Conference Report on H.R. 6, latest version of the energy legislation in the current 108th Congress).

²²³ *See infra* Part II.A.

²²⁴ *See infra* Part II.B.

²²⁵ *See* ELECTRICITY RESTRUCTURING 106TH CONGRESS, *supra* note 222; ELECTRICITY RESTRUCTURING 107TH CONGRESS, *supra* note 222.

²²⁶ *See* ELECTRICITY RESTRUCTURING 106TH CONGRESS, *supra* note 222, at 4.

trated much more on the generation side of the industry than the transmission side.²²⁷ These pieces of legislation contained provisions to reform the Public Utility Holding Companies Act (“PUHCA”); to increase the exemptions for Qualifying Facilities (“QFs”) under PURPA; and to take jurisdiction from the states and require retail competition for end electricity users.²²⁸ None of these comprehensive energy bills passed both the House and Senate, however.

Energy legislation was more successful in the 107th Congress. The main vehicle for energy reform in the 107th Congress was House Bill 4, the Energy Policy Act of 2002, as passed by the Senate.²²⁹ The Senate version of House Bill 4 contained provisions that would have repealed PUHCA and given the FERC the power to review the financial books of utility companies.²³⁰ House Bill 4 would also have eliminated the mandatory purchase requirement of PURPA, so that utility companies would no longer be forced to buy energy generated by QFs.²³¹ House Bill 4, however, contained no provisions to encourage RTOs or to create incentives to build transmission assets.²³²

Because the House and Senate passed differing versions of House Bill 4, they were sent to a Conference Committee to create a compromise version of the bill.²³³ The Conference Committee, however, failed to reach an agreement before the end of the 107th Congress in 2002.²³⁴

B. *The Omnibus Energy Bill in the 108th Congress: The Energy Policy Act of 2003*

The main vehicle for energy reform legislation in the current, 108th Congress is House Bill 6, the Energy Policy Act of 2003.²³⁵ As of the writing of this note, there are three relevant versions of this legislation: House Bill 6 as passed by the House of Representatives, House Bill 6 as passed by the Senate, and the recent Conference Committee Report on House Bill

²²⁷ See *id.* at 1.

²²⁸ See *id.* at 4.

²²⁹ ELECTRICITY RESTRUCTURING 107TH CONGRESS, *supra* note 222, at 1. The House version of H.R. 4 did not contain energy restructuring language. *Id.*

²³⁰ *Id.*

²³¹ See *id.*

²³² See *id.*

²³³ See *id.*

²³⁴ See *id.*

²³⁵ See Energy Policy Act, H.R. 6, 108th Cong. (2003) (as passed by the House); See H.R. 6, (as passed by the Senate).

6.²³⁶ A brief review of these three versions and their legislative history follows.

1. The Energy Policy Act, House Bill 6, as Passed by the House of Representatives

House Bill 6 originated in the House of Representatives; it was submitted on April 7, 2003.²³⁷ House Bill 6 shared many of the characteristics of House Bill 4 from the 107th Congress; because of this and other reasons, it was allowed to in effect skip the committee process and go straight to the House floor for consideration.²³⁸ On April 11, 2003, House Bill 6 was passed by the House with a vote of 247 to 175.²³⁹

The House version of House Bill 6 covers a large number of energy-related issues, including energy conservation and renewable fuels, hydroelectric power, nuclear power, and fuels.²⁴⁰ The electricity provisions are contained in Title VI.²⁴¹ Most importantly for the purposes of this paper, the House version of House Bill 6 contains a provision that requires the FERC to set up incentive-based pricing mechanisms for the transmission of power.²⁴² This provision survived the Conference intact, and will be discussed in detail below.²⁴³ Furthermore, the House version also contained a provision expressing the “Sense of Congress” that utilities should *voluntarily* become members of an RTO, and that the FERC should provide those utilities that join RTOs with incentive rates for transmission.²⁴⁴

The House version of House Bill 6 also contains several other energy-related provisions. The House version would give the FERC the power to determine the locations of new power lines, and give construction permits

²³⁶ H.R. 6 (as passed by the House); H.R. 6 (as passed by the Senate); H.R. CONF. REP. NO. 108-375 (2003) (Conference Report on H.R. 6).

²³⁷ See Bill Summary & Status for 108th Congress, H.R. 6, at <http://thomas.loc.gov> (last visited Aug. 3, 2004) [hereinafter H.R. 6. Summary & Status]

²³⁸ See *id.* House Bill 6 was moved quickly to the floor of the House by a special procedure. *Id.* The House of Representatives resolves itself into a “Committee of the Whole House”; in effect, they are no longer in legislative mode but are instead one large committee. *Id.* They then “passed” House Bill 6 out of this “committee.” *Id.* They then “rose from the Committee of the Whole,” i.e., went back into legislative mode, and reported House Bill 6 to the House. *Id.* This in effect skips the normal committee process by majority vote of the House. *Id.*

²³⁹ See *id.*

²⁴⁰ See generally Energy Policy Act, H.R. 6, 108th Cong. (2003) (as passed by the House).

²⁴¹ H.R. 6 (as passed by the House).

²⁴² H.R. 6, § 16011 (as passed by the House).

²⁴³ See discussion *infra* Part II.C.

²⁴⁴ Energy Policy Act, H.R. 6, 108th Cong. § 16022(a)-(b) (2003) (as passed by the House).

to build them that are imbued with the power of imminent domain.²⁴⁵ The House version would also give the FERC additional regulatory authority over certain government-owned utilities that were not previously under its jurisdiction.²⁴⁶ It would also create an Electric Reliability Organization under the FERC to create and enforce energy reliability standards, repeal PUHCA entirely, repeal the mandatory purchase of power requirements of PURPA, and explicitly give the FERC exclusive authority to review mergers of utility companies.²⁴⁷

2. The Energy Policy Act, House Bill 6, as Passed by the Senate

The Senate received the House-passed version of House Bill 6 on April 29, 2003.²⁴⁸ The Senate unanimously agreed to consider the legislation on July 31, 2003.²⁴⁹ The Senate proceeded to simply replace (by amendment) the language of the House-passed version of House Bill 6 with the text of the 107th Senate's version of House Bill 4.²⁵⁰ In other words, the Senate ultimately passed the same energy bill in the 108th Congress that it passed in the 107th Congress.²⁵¹ The Senate then requested a Conference with the House on the differing versions of the legislation, and appointed its conferees.²⁵²

However, prior to the passage of the Senate version of House Bill 6, the Senate had been considering its own comprehensive energy bill, Senate Bill 14.²⁵³ Though the Senate stopped debate on Senate Bill 14 to instead consider and pass House Bill 6, they still wished to include some of the provisions of Senate Bill 14 in the Conference.²⁵⁴ This was done by the selective appointment of conferees to the Senate Conference Committee, specifically Senator Domenici.²⁵⁵ Senator Domenici was the author of Sen-

²⁴⁵ See AMY ABEL, CONG. RESEARCH SERV., No. RL32041, ELECTRIC UTILITY POLICY: COMPARISON OF HOUSE-PASSED H.R. 6 AND S.AMNDT. 1412, at 5-6 (2003) [hereinafter ELECTRIC UTILITY POLICY].

²⁴⁶ See *id.* at 8.

²⁴⁷ See *id.* at 9-35.

²⁴⁸ H.R. 6, Summary & Status, *supra* note 237.

²⁴⁹ *Id.*

²⁵⁰ ELECTRIC UTILITY POLICY, *supra* note 245, at 1.

²⁵¹ See *supra* Part II.A for a discussion of some of the provisions of the 107th Senate version of H.R. 4.

²⁵² See H.R. 6, Summary & Status, *supra* note 237. The Senate conferees appointed were Senators Domenici; Nickles; Craig; Campbell; Thomas; Grassley; Lott; Bingaman; Dorgan; Graham FL; Wyden; Johnson; and Baucus. See *id.*

²⁵³ ELECTRIC UTILITY POLICY, *supra* note 245, at 1.

²⁵⁴ See *id.*

²⁵⁵ See *id.*

ate Amendment 1412, an important and comprehensive amendment to the Senate's Senate Bill 14 energy legislation.²⁵⁶ As a result, many of the provisions of Senate Amendment 1412 were considered in the Conference Committee, despite not having passed either chamber of Congress.²⁵⁷

Senate Amendment 1412 contains several electricity provisions. Most importantly for this note, one such provision encourages the creation of new transmission, though it does not use the mechanism of incentive-based rates used in the House version of House Bill 6.²⁵⁸ Furthermore, Senate Amendment 1412 contained provisions expressing the "Sense of Congress" that utility companies should voluntarily join RTOs.²⁵⁹ On the other hand, the amendment also contained a provision expressly forbidding the FERC to require utilities to join an RTO.²⁶⁰ Other provisions of Senate Amendment 1412 include the setting up of an Energy Reliability Organization, the repeal of PUHCA, the repeal of the requirement that utilities purchase all of the power generated by a QF under PURPA, and a provision to give the FERC explicit control over large utility company mergers.²⁶¹

3. The Conference Committee Report on House Bill 6

After the Senate passed its version of House Bill 6, the House of Representatives unanimously agreed to disagree with the Senate's amendment and instead agreed to a conference.²⁶² On September 5, 2003, the House appointed its conferees.²⁶³ The Conference Committee began that same day, and continued until their finished report was filed on November 18, 2003.²⁶⁴ This report was numbered House Report 108-375.²⁶⁵ On the same day that it was filed, the Conference Report was brought up and passed the House by a vote of 246 to 180.²⁶⁶ The Senate agreed to consider the Conference Report the next day; however, when the cloture vote was taken, it failed by three votes.²⁶⁷ Thus, as of August 30, 2004, the Conference Report is still stalled in the Senate.²⁶⁸

²⁵⁶ *See id.*

²⁵⁷ *See id.*

²⁵⁸ ELECTRIC UTILITY POLICY, *supra* note 245, at 3-4.

²⁵⁹ *Id.* at 9.

²⁶⁰ *Id.*

²⁶¹ *See id.* at 9-35.

²⁶² H.R. 6. Summary & status, *supra* note 237.

²⁶³ *Id.* The House conferees were Congressmen Tauzin, Bilirakis, Barton, Upton, Stearns, Gillmor, Shimkus, Dingell, Waxman, Markey, Boucher, and Rush. *Id.*

²⁶⁴ *Id.*

²⁶⁵ H.R. CONF. REP. NO. 108-375 (Energy Policy Act of 2003).

²⁶⁶ H.R. 6. Summary & Status, *supra* note 237.

²⁶⁷ *See id.* Because of the rules of the Senate and its history of open debate, when a bill is brought

The energy provisions of the Conference version of House Bill 6 are contained in Title XII of the legislation.²⁶⁹ First, it contains a provision to provide incentive based rates for RTOs, discussed separately below.²⁷⁰ It also contains a “Sense of Congress” provision encouraging utilities to join RTOs voluntarily.²⁷¹ It also contains provisions to allow the FERC to grant orders to place transmission power lines under the power of eminent domain, and creates an Electricity Reliability Organization to create and enforce guidelines on power reliability.²⁷² The Conference Report also repeals the PUHCA statute so as to allow public utility holding companies to expand their assets, repeals the requirement that utilities purchase all power generated by QFs under PURPA so long as the FERC decides a competitive power market exists, and increases criminal penalties under the FPA.²⁷³

C. *Provisions Regarding Regional Transmission Organizations in the House Bill 6 Conference Report*

Section 1241 of the Conference Report contains two interrelated provisions directly relevant to the encouragement of RTOs; these provisions relate to incentive-based rates for transmission companies.²⁷⁴ Section

up to be considered, debate can go on indefinitely. THE CONGRESSIONAL INSTITUTE, FLOOR PROCEDURE IN THE U.S. SENATE (3rd ed. 2001); *see also* H.R. 6. Summary & Status, *supra* note 237. There is a procedure to limit debate on a bill to a certain fixed period of time, called “cloture”; but this requires 60 votes of the 100 person Senate. THE CONGRESSIONAL INSTITUTE, *supra*; *see also* H.R. 6. Summary & Status, *supra* note 237. The cloture motion for the Conference Report on H.R. 6 received only 57 votes, so debate is still open on the measure. H.R. 6. Summary & Status, *supra* note 237. A vote on final passage of the House Bill 6 Conference Report cannot be taken until debate ends. *See* THE CONGRESSIONAL INSTITUTE, *supra*; *see also* H.R. 6. Summary & Status, *supra* note 237.

²⁶⁸ There is little hope at this point that the Conference Report will pass during 2004. Key conferees originally believed that the New York blackout would add significant political pressure to pass the Report, or at least some part of it. However, the bill has instead become a political football of sorts. Certain members of the Democratic and Republican parties have used issues touched-upon by H.R. 6 to differentiate themselves from one another in the coming election year, and neither side wishes to grant the other a political victory so close to election day. When the 108th Congress ends, it is likely the bill will still be stalled in the Senate. At this point, of course, it will die. It remains to be seen if it will be reincarnated in the 109th Congress. I have benefited from discussions with Craig Roberts, Chief of Staff to House Bill 6 conferee Congressman John Shimkus (Republican, Ill.), on this issue.

²⁶⁹ H.R. CONF. REP. NO. 108-375, at 258.

²⁷⁰ *See* discussion on incentive-based rates, *infra* Part II.C.

²⁷¹ H.R. CONF. REP. NO. 108-375, at 275.

²⁷² *See* ROAD TOWARD RESTRUCTURING, *supra* note 19, at 14.

²⁷³ *See id.*

²⁷⁴ *See* H.R. CONF. REP. NO. 108-375, at 280-81.

1241(a) tells the FERC that it must create a new rule to encourage reliability and construction of transmission assets; Section 1241(b) tells the FERC that, when creating the rate, it should specifically encourage RTO formation.²⁷⁵ The language of these two sections will be provided here, and analyzed in depth later in Section III of this note.²⁷⁶

First, Title XII(D), Section 1241(a) of the Energy Policy Act of 2003 mandates that the FERC create incentive-based rates for power transmission companies.²⁷⁷ It amends the FPA to add Section 218, which reads:

(a) RULEMAKING REQUIREMENT - Within 1 year after the enactment of this section, the Commission shall establish, by rule, incentive-based (including, but not limited to performance-based) rate treatments for the transmission of electric energy in interstate commerce by public utilities for the purpose of benefiting consumers by ensuring reliability and reducing the cost of delivered power by reducing transmission congestion. Such rule shall—

(1) promote reliable and economically efficient transmission and generation of electricity by promoting capital investment in the enlargement, improvement, maintenance and operation of facilities for the transmission of electric energy in interstate commerce;

(2) provide a return on equity that attracts new investment in transmission facilities (including related transmission technologies);

(3) encourage deployment of transmission technologies and other measures to increase the capacity and efficiency of existing transmission facilities and improve the operation of such facilities; and

(4) allow recovery of all prudently incurred costs necessary to comply with mandatory reliability standards issued pursuant to section 215 of this Act.

The Commission may, from time to time, revise such rule.²⁷⁸

In other words, this section requires the FERC to promulgate a rule that allows transmission facilities to charge higher rates for the transmission of energy where the FERC finds it would benefit power consumers.²⁷⁹ The Conference Report also sets out the goals the FERC should attempt to achieve with this rate.²⁸⁰ Furthermore, the FERC has stated that it intends to use this new authority to encourage participation in RTOs by allowing RTO

²⁷⁵ *Id.*

²⁷⁶ *See infra* Part III.C.

²⁷⁷ *See* H.R. CONF. REP. NO. 108-375, at 280-81.

²⁷⁸ *Id.*

²⁷⁹ *See id.*

²⁸⁰ *Id.*

transmission facilities to charge higher prices for the transmission of power.²⁸¹

Indeed, the following section makes clear that Congress intends for the FERC to use its authority to give incentives for RTO participation. Section 1241 of the Energy Policy Act goes on to amend the FPA by adding section 218(b), which reads as follows:

(b) ADDITIONAL INCENTIVES FOR RTO PARTICIPATION- In the rule issued under this section, the Commission shall, to the extent within its jurisdiction, provide for incentives to each transmitting utility or electric utility that joins a Regional Transmission Organization or Independent System Operator. Incentives provided by the Commission pursuant to such rule shall include—

(1) recovery of all prudently incurred costs to develop and participate in any proposed or approved RTO, ISO, or independent transmission company;

(2) recovery of all costs previously approved by a State commission which exercised jurisdiction over the transmission facilities prior to the utility's participation in the RTO or ISO, including costs necessary to honor preexisting transmission service contracts, in a manner which does not reduce the revenues the utility receives for transmission services for a reasonable transition period after the utility joins the RTO or ISO;

(3) recovery as an expense in rates of the costs prudently incurred to conduct transmission planning and reliability activities, including the costs of participating in RTO, ISO and other regional planning activities and design, study and other precertification costs involved in seeking permits and approvals for proposed transmission facilities;

(4) a current return in rates for construction work in progress for transmission facilities and full recovery of prudently incurred costs for constructing transmission facilities;

(5) formula transmission rates; and

(6) a maximum 15-year accelerated depreciation on new transmission facilities for rate treatment purposes.

The Commission shall ensure that any costs recoverable pursuant to this subsection may be recovered by such utility through the transmission rates charged by such utility or through the transmission rates charged by the RTO or ISO that provides transmission service to such utility.²⁸²

²⁸¹ See ELECTRIC RELIABILITY, *supra* note 13, at 6-7. Additionally, members of the Conference Committee were informed that the FERC intends to use such incentive-based ratemaking authority to encourage utility companies to join RTOs, by increasing their rates of return on transmission. I have benefited from discussion on this issue with Ray Fitzgerald, Legislative Director to House Bill 6 conferee Congressman John Shimkus (Republican, Ill.).

²⁸² H.R. CONF. REP. NO. 108-375, at 281.

In other words, this section tells the FERC that, when they are creating a new rate to encourage new transmission formation and reliability under Section 218(a), they should specifically use this new rate to encourage RTO formation.²⁸³ Additionally, the FERC should make the rate high enough that it compensates RTOs for a laundry list of costs related to transmission infrastructure improvement.²⁸⁴

III. ANALYSIS

Clearly, something must be done about the problems in the power industry. On that point, there is a consensus, and any who might have disagreed were shocked into accord by the August blackout in New York City.²⁸⁵ Regional Transmission Organizations (“RTOs”) are one possible part of the solution to these problems with the power grid, and the incentive-based rates proposed in House Bill 6 are one possible way to encourage RTOs. However, the untried nature of the RTO and the legacy of heavy regulation in the power industry make it less than obvious what effect House Bill 6 will actually have on our nation’s electricity problems.

In order to determine the effect of House Bill 6, first the current laws and regulations will be analyzed; many are outdated and need to be changed.²⁸⁶ Second, the current problems with the power grid—in part due to these outdated regulations—will be examined.²⁸⁷ Third, the incentive-based rate provisions of House Bill 6, proposed as part of the solution to these problems, will be examined in detail.²⁸⁸ Fourth, it will be determined whether these incentive-based rates will actually encourage RTO formation.²⁸⁹ Finally, it will be asked whether increased RTO participation will actually help the current problems of the power industry, and if so, to what extent.²⁹⁰

A. *Current Laws and Regulations: Rules of a Different Age*

Changes in technology have rendered most of the current rules and regulations governing the electricity industry nonsensical. The current laws

²⁸³ *See id.*

²⁸⁴ *See id.*

²⁸⁵ *See generally* ELECTRIC RELIABILITY, *supra* note 13, at 1-2.

²⁸⁶ *See infra* Part III.A.

²⁸⁷ *See infra* Part III.B.

²⁸⁸ *See infra* Part III.C.

²⁸⁹ *See infra* Part III.C.3.

²⁹⁰ *See infra* Part III.D.

and regulations were written during a time when both the generation and transmission of power were necessarily part of a vertically integrated monopoly.²⁹¹ In contrast, it is clear that today only the *transmission* of power, not its generation, is a natural monopoly. For the power generation sector of the industry to be opened up to the free market, generation and transmission of power must somehow be unlinked, and only the transmission sector regulated.

1. The Early 1900s: Utilities as Natural Monopolies

When the Federal Power Act (“FPA”) and the Public Utility Holding Company Act (“PUHCA”) were passed in 1935, the entire electrical industry was made up of multiple natural monopolies.²⁹² Natural monopolies are the “good” sort of monopoly—the sort that is the most efficient way to organize an industry.²⁹³ To be a natural monopoly, an industry must have: (1) an inherent tendency toward declining long-term costs, (2) high threshold investment, and (3) technological conditions that limit the number of potential entrants.²⁹⁴

In 1935, public utilities that provided monopoly generation and transmission of power to their consumers met this definition. First, both generation and transmission assets had declining long-term costs, because most of the costs of creating and delivering electricity come from investments in capital, such as huge and expensive power generation facilities and the laying of power lines.²⁹⁵ Compared to the initial investment in infrastructure and equipment, the costs of generating the power and sending it through the power grid are quite low.²⁹⁶ Because most of the costs were tied up in the initial capital, over time the price of that capital would be paid off, and their long-term costs would decline.²⁹⁷ Second, there was a high threshold of investment for a new utility to enter the electricity business. Building the old sort of power generation facilities—especially nuclear facilities—was a very large investment; so too was the laying of power cables.²⁹⁸ Because of this, it was difficult for new utilities to enter the market. And finally, there were technological conditions that limited the number of utilities that could feasibly generate and transmit power to a given consumer. After all, there

²⁹¹ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 1-2.

²⁹² See *id.*

²⁹³ See ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS, 29-30, 129 (3d ed. 2000).

²⁹⁴ ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2.

²⁹⁵ See generally ELECTRIC RELIABILITY, *supra* note 13, at 1.

²⁹⁶ See *id.*

²⁹⁷ See COOTER & ULEN, *supra* note 293, at 79.

²⁹⁸ See ELECTRIC RELIABILITY, *supra* note 13, at 1-2.

are only so many different power wires a person wants coming into his home, or that the government wants lining the roads. Furthermore, in the early 1900s, power-generating facilities had to be places much closer to the end consumers, because electricity rapidly degenerated as it traveled; this limited the market to which such generators could sell.²⁹⁹

These technological and investment constraints combined to make it inherently difficult for there to be competing electricity firms each attempting to sell power to an end consumer.³⁰⁰ This intuitively makes sense; it would be a huge duplication of expensive capital to have two or three competing power grids, or multiple large generators serving only small areas of the grid. Public utilities were thus a natural monopoly.

In the environment of the early 1900s, then, the rules and regulations in force against the electrical industry made sense. First, while a natural monopoly is perhaps the best way in which to organize an industry, it is still only the best of multiple evils.³⁰¹ The utilities could, and did, use their monopoly power to charge consumers excessive rates and provide less than optimal service.³⁰² Federal legislation to help govern these monopolies was needed, because they were often large, complicated, and interstate in character.³⁰³ The FERC's setting of prices for energy sold in interstate commerce also made sense under this monopoly theory.³⁰⁴

2. The Modern Era: Transmission of Power as a Natural Monopoly

As time went on, however, integrated utilities lost their status as natural monopolies; transmission assets retained the characteristics necessary to be included, but generation assets lost them. While power generation assets still had declining long-term costs, new technology lowered the threshold investment required to enter the generation industry. New types of small power generating facilities were invented that were relatively cheap to build and bring online, with efficiencies rivaling those of large nuclear power plants.³⁰⁵ Furthermore, the technological constraints limiting multiple entrants into the generation market largely disappeared. Transmission lines were now good enough that power could be sent over longer distances,

²⁹⁹ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 1-2.

³⁰⁰ See generally COOTER & ULEN, *supra* note 293, at 29-30, 129; ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2.

³⁰¹ See COOTER & ULEN, *supra* note 293, at 29-30, 129.

³⁰² ROAD TOWARD RESTRUCTURING, *supra* note 19, at 2.

³⁰³ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 1-2.

³⁰⁴ See *id.*

³⁰⁵ See ELECTRIC RELIABILITY, *supra* note 13, at 1-2.

meaning that generation facilities had a larger market to which they could sell.³⁰⁶

Generation was no longer a natural monopoly. Congress recognized this fact by encouraging the creation of independent generating facilities under PURPA and EPACT.³⁰⁷ However, they also left many laws intact that govern both transmission and generation, such as PUHCA's limitations against electricity holding companies.³⁰⁸ Furthermore, instead of eliminating old laws that required the FERC to set prices for electricity generated and then sold in interstate commerce, Congress simply riddled it with exceptions.³⁰⁹ Because the rules and regulations did not distinguish between generation and transmission, they began to become incoherent.

3. What Must Be Done: Regulation of Only Transmission

The laws and regulations governing the power industry must be updated to fit the changing times. First, as a preliminary matter, the twin businesses of power generation and power transmission must be separated so that each may be regulated separately. Next, regulations on power generation should be eliminated, because generation is no longer a natural monopoly. Finally, the FERC must regulate monopoly transmission assets as it formerly regulated the conglomerate monopoly utilities.

First, the United States must finish what the FERC started in Order 888: Ownership of power generation assets must be forcibly separated from ownership of power transmission assets. The current system of "functional unbundling" has not been strong enough to do the job; utility companies that own both transmission and generation still commonly use their monopoly over transmission assets to prop up an otherwise dying monopoly over generation assets.³¹⁰

By way of analogy, imagine a world where Federal Express owned all of the roads in the United States in addition to its shipping facilities. Federal Express could exclude all United Postal Service ("UPS") trucks from traveling the Federal Express-owned roads. While UPS might be able to process packages more cheaply than Federal Express, it would not matter, because UPS could not deliver those packages without use of the roads.

The same is true of generation and transmission assets. If ownership of transmission and generation were not separated or regulated, an independ-

³⁰⁶ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 1-2.

³⁰⁷ See 15 U.S.C. § 79z-5a(a)(1) (2000); 16 U.S.C. § 824a-3 (2000).

³⁰⁸ 15 U.S.C. § 79k(b)(1)-(2) (2000).

³⁰⁹ See generally 15 U.S.C. § 79 (2000); 16 U.S.C. § 824a-3 (2000).

³¹⁰ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 2-12.

ent power generator could create energy more cheaply than its monopoly competitors but still not be able to sell it. The monopoly utilities could prevent that power from traveling down the monopoly's "roads"—their transmission lines—and ensure themselves a monopoly not only over transmission but also over generation.

Congress anticipated this problem, and explicitly gave the FERC authority to stop such practices with the passage of EPACT in 1992.³¹¹ The FERC responded by ordering the utility companies to create a wall between their generation assets and their transmission assets; but it is a very thin wall indeed.³¹² Utilities must allow everyone un-discriminatory access to the "roads" of the power grid; but magically, the utility's own generators seem to have the right-of-way. This discrimination takes the form of complicated formulas that charge competing generators slightly higher prices for transmission, advanced knowledge of "special deals" to the utility company's own generating facilities, advanced reservation of transmission paths by utility generators, and other subtle mechanisms.³¹³ This discrimination has a large effect in the fast-paced power market.³¹⁴ Furthermore, even the perception of unfairness can have a negative effect on a market.³¹⁵ More separation of ownership for transmission and generation assets is needed.

Second, once ownership of transmission and generation facilities are firmly separated, the regulations on power generation need to go away. Investment in generation assets would be encouraged if the uncertainty of current laws and regulations was wiped away.

For instance, unless given exemptions by other laws, generators are still required to set their prices through the FERC at the cost of generating the power.³¹⁶ Such a price does not provide incentives for power generators to enter the market. If the electrical industry were like most industries, an insufficient supply of a power to meet demand for power would result in the price of power going up until supply equals demand (because less people are willing to purchase power at this new higher price).³¹⁷ Furthermore, the new, higher price for power signals to other firms that they can build power generation plans and receive a premium for their power sales. However, if potential investors know that the FERC will set the price of power generated at their facilities not to this new high price, but instead to a lower

³¹¹ 16 U.S.C. § 824k(a), (c) (2000).

³¹² See F.E.R.C. Order 888, Open Access Rules, 75 F.E.R.C. 61, 080, at 57-61.

³¹³ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 152-63.

³¹⁴ See *id.*

³¹⁵ See *id.* at 2-12, 152-63.

³¹⁶ 16 U.S.C. §§ 824d-e (2000).

³¹⁷ See generally COOTER & ULEN, *supra* note 293, at 29-30, 129.

price determined by the cost to create the power, then fewer new firms will enter the market.

Luckily, most independent power generators are now exempt from this FERC price-setting due to exemptions under EPACT or PURPA.³¹⁸ However, to the extent this price-setting remains once ownership of transmission and generation have been separated, it will be inefficient and should be eliminated.

Furthermore, restrictions on holding companies owning power generators under PUHCA should also be eliminated.³¹⁹ It is unlikely that a holding company will be able to buy up enough power generation facilities across the United States to create anything that even resembles a power generation monopoly; however, even if they did so, it could be handled with existing anti-trust laws.³²⁰ Eliminating the PUHCA restrictions would allow holding companies to diversify their assets by purchasing generation firms in different parts of the country, and thus having better access to a wider variety of power markets.³²¹ This would reduce risk in the industry, and increase investment in new power generation.³²²

Finally, the FERC must regulate the new transmission monopolies as it once regulated the conglomerate monopolies of both transmission and generation. It is almost certainly more efficient for there to be a monopoly in power transmission; the additional expense and clutter of creating a second or third competing power grid would probably outweigh the benefits.³²³ However, transmission firms will have the ability to set monopoly prices for transmission of power; in other words, they can charge more and transmit less power than if they were not monopolies. These higher prices for transmission would be passed down to consumers and result in higher power bills; the lesser amount of power transmitted would probably result in less power lines being constructed.³²⁴ This outcome is inefficient, and the FERC must maintain some control over the price charged for transmission of power, be it by an RTO or some other entity.

B. *Current Problems with Transmission: A Grid in Flux*

The power industry is in a transition period from its previous status as a pure monopoly over both transmission and generation, to its new status of

³¹⁸ See 15 U.S.C. § 79z-5a(a)(1) (2000); 16 U.S.C. § 824a-3 (2000).

³¹⁹ 15 U.S.C. § 79k(b)(1)-(2) (2000).

³²⁰ See ELECTRIC RELIABILITY, *supra* note 13.

³²¹ See ROAD TOWARD RESTRUCTURING, *supra* note 19, at 9-10.

³²² See *id.*

³²³ See generally COOTER & ULEN, *supra* note 293, at 29-30, 129.

³²⁴ See generally *id.*

a monopoly over transmission with a competitive market for generation. This change, combined with laws and regulations that have not kept pace with that change, have caused various problems in the power industry. In the case of transmission assets and the power grid, these problems can generally be fit into three categories: lack of investment in the power grid due to poor transmission pricing formulas by the FERC; lack of coordination in the power grid due to its new, semi-independent status; and lack of competition in the industry due to poor separation of generation from transmission.

1. Lack of Investment: A Power Grid Inadequate for its Purpose

The changing regulatory structure has reduced the incentives to invest in transmission assets. Over the past ten-or-so years, demand for power has increased by about two-to-three percent per year, while supply of transmission has increased only about seven-tenths of a percent per year.³²⁵ Regulators and industry officials agree that more transmission lines are desperately needed.³²⁶ There are two main causes for this under-investment: First, the FERC has incorrectly priced transmission; and second, even “correctly” priced transmission under FERC guidelines would not take into account an appropriate premium for the uncertainty of the power industry.

First, the FERC has priced transmission assets in a manner that does not allow owners of transmission lines to recover the full cost of their transmission. The FERC, in Order 888, required all utilities owning transmission lines to set out a single tariff for the use of those lines.³²⁷ However, there are several problems with how this tariff is calculated. First, it tends to under compensate transmission facilities for new capital investments, such as new power lines.³²⁸ Second, the very nature of the single tariff for an entire section of power grid often causes the transmission facility to be under compensated. Transmission capability is not the same throughout a section of power grid; there are usually “bottlenecks” that are either on a popular path through which to send power, or have inadequate transmission lines, or both.³²⁹ These areas become very congested; in other words, there is more demand to send power through them than there is supply of transmission capacity to carry the power.³³⁰ Logically, it would make sense to

³²⁵ ELECTRIC RELIABILITY, *supra* note 13, at 4.

³²⁶ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285 (1999), at 1-12; Radford, *supra* note 174, at 4.

³²⁷ See FERC Regulations Under the Federal Power Act, 18 C.F.R. § 35.28(c)(1)(i) (2003).

³²⁸ See Spiwak, *supra* note 33, at 39-41.

³²⁹ See ELECTRIC RELIABILITY, *supra* note 13, at 4, 6.

³³⁰ See *id.* at 4; ROAD TOWARD RESTRUCTURING, *supra* note 19.

charge those who wish to send power through these congested lines a premium. This premium would both encourage those sending the power to look for other potential routes, and encourage the transmission company to build more transmission lines in the congested region. However, utility companies often cannot differentiate their price based on this congestion, because the FERC requires them to have a single tariff in place for their entire area of the grid.³³¹ Because of this, the current transmission pricing system chronically under compensates those investing in new transmission.

Second, the FERC pricing mechanisms does not take into account the great uncertainty of the industry. Prior to electricity restructuring, the monopoly utilities were very safe investments; the business structure was tried and true, and the regulations surrounding the industry had been in place for years without significant amendment.³³² However, recently both of these things have changed. The FERC is now recommending that utilities divest their transmission or give control of their transmission assets to ISOs or RTOs; these are business structures that have not been proven to be profitable.³³³ Furthermore, it is clear that regulations surrounding the electricity industry are still in flux, and no one knows exactly how they will turn out. For example, for a utility to be able to calculate whether a new transmission line is worth the money they would invest in building it, they need to know how much they will be able to charge for its use, what sort of customer base they will have using the line, what sort of incentives the government might provide for its construction, etc.³³⁴ Currently, all of these things are in flux, and the future regulatory structure of the industry is uncertain.

Uncertainty in an industry is synonymous with risk—the less able you are to predict what will happen in an industry, the more risky the investment becomes. People in general are risk-averse, especially when dealing with large amounts of money; they must be paid extra—a “risk premium”—to take the investment despite the uncertainty.³³⁵ FERC formulas for what a utility can charge for transmission services does not take into

³³¹ See 18 C.F.R. § 35.28(c)(1)(i); Spiwak, *supra* note 33, at 41.

³³² See ELECTRIC RELIABILITY, *supra* note 13, at 11.

³³³ See *id.* at 8-10.

³³⁴ See *generally id.* at 7-9.

³³⁵ See *generally* COOTER & ULEN, *supra* note 293, at 36-52. A common intuitive example of human risk adversity is often stated in the following terms: Imagine that someone offers you a choice. He will either give you \$100,000.00 right now, with no questions asked; *or* he will flip a fair, un-weighted coin. If that coin comes up Heads, you will receive \$210,000.00; but if it comes up Tails, you will receive no money at all. Note that, on average, you would receive more money by taking the coin flip—one in two times you would receive \$210,000.00, for an average of \$105,000.00 (which is, of course, more than \$100,000.00). However, most people would still prefer to take the certain \$100,000.00 than the uncertain, risky coin flip for \$210,000.00. See *generally id.*

account this risk premium, and thus under compensates those who invest in the new lines.

This under compensation of transmission rates has led to an acute shortage of transmission lines and a reduction in the reliability of the power grid.

2. Lack of Coordination: A Grid without Central Authorities

The purpose of the power grid has changed. Before, it was simply a system to transport electricity from regional generators to nearby customers; today, it is the crossroads for a budding international market in power.³³⁶ However, as the purpose of the grid has changed, its organization has not changed with it; it is, by and large, still organized and operated by multiple and uncoordinated local utility companies.³³⁷ This lack of coordination among the fractured pieces of the power grid has had several negative consequences. First, it has made it more difficult to repair or improve the power grid while maintaining its ability to handle an international power market. Second, it has made it more difficult for generators to send power from place.

First, the fractured and uncoordinated nature of the current power grid has made it difficult to do even routine maintenance, let alone expansions or large upgrades in infrastructure. The grid has become more interconnected, and is now expected to carry much larger volumes of electricity traffic, due to the international market in electricity. These facts have made it more difficult to coordinate repairs and construction.³³⁸ When one portion of the grid is taken offline for maintenance or repair, other areas of the grid—perhaps owned by completely different utility companies—are expected to compensate.³³⁹ If multiple utility companies happen to take parts of their transmission lines offline at the same time, however, it can result in severe congestion in the power lines, or even blackouts.³⁴⁰ Some utility companies, notably in California, have taken to attempting coordination on such maintenance via web pages and other communications, but in most areas, it is still unorganized.³⁴¹ Some sort of central authority is probably needed for each region, to aid in the coordination of transmission resources.

³³⁶ See ELECTRICITY RESTRUCTURING (PUHCA), *supra* note 34, at 1-2.

³³⁷ See *id.* at 1-4.

³³⁸ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 39-42 (1999).

³³⁹ See *id.*

³⁴⁰ See *id.*

³⁴¹ *Id.* at 42.

Next, the lack of organization also makes it more difficult for generators to transmit power from place to place. This difficulty results from two general sorts of problems: transaction costs, inefficient pricing schemes, and externalities. First, a generator often has to contract with many different utilities in order to get his power from point A to point B.³⁴² For instance, generators in the South sending their power to Florida might have to piece together a route for their power through the transmission systems of five or more different utilities, each charging its own rate.³⁴³ This becomes even more pronounced as the distance the power travels increases. Unless the area has an RTO, there is often no central company or market in a region that one can visit to purchase transmission services; this results in relatively high transaction costs.

Furthermore, the fractured nature of the grid leads to inefficient pricing schemes. When a generator sends electricity from one place to another, it often crosses multiple small grids each owned by different utility companies.³⁴⁴ Because of how the FERC handles pricing of transmission, each of those small utility companies gets to charge the generator a tariff.³⁴⁵ This phenomenon, which is known as “pancaking” of rates, often creates the illogical result of prices for transmission that are determined not by the distance the electricity travels, or how congested the lines are, but instead by how many fractured utilities happen to be in an area that one’s power is crossing.³⁴⁶ The transmitting utilities do not coordinate with each other to see whether or not a tariff had already been paid by this particular bolt of power; indeed, they have little reason to care so long as they get their own tariff. This lack of coordination on pricing schemes, then, leads to inefficient results.

Finally, there are externalities that are inherent in sending power from place to place; these externalities could be reduced, if not eliminated, by coordination. The most prominent of these externalities is called “loop flow”—it is the tendency of electricity to follow the path of least resistance, even if that path takes it into the transmission network of a neighboring utility that is not expecting the extra power.³⁴⁷ For instance, say Utility A and Utility B’s transmission lines are roughly parallel to one another. Utility A contracts with a power generator to transport his power from point C to point D. The generator sends the power along Utility A’s transmission

³⁴² See *id.* at 1-15.

³⁴³ See *id.* at 43.

³⁴⁴ See ELECTRIC RELIABILITY, *supra* note 13, at 6-12. This is in part because the exact path of power is so hard to control. *Id.*

³⁴⁵ See discussion of Order 888 open-access tariffs, *supra* Part I.C.1.

³⁴⁶ See Radford, *supra* note 174, at 4-6.

³⁴⁷ See Cicchetti & Long, *supra* note 174, at 38.

lines, but somewhere along the line, the power decides it wants to take a “short cut” over into Utility B’s area of the grid. There is little that Utility B can do to stop this, even though he was not paid for this unsolicited transmission of power. Utility B then has to try and figure out where the power came from and how much it cost to transmit it. This lack of coordination makes it more difficult for the transmission companies to make contracts and transmit power.

3. Lack of Competition: The Shadow of Monopoly Remains

The generation sector of the energy industry operates not in a free market, but under the shadow of monopoly. Thanks to PURPA and EPACT, new generation facilities can enter the market with relative ease, and thus theoretically compete with one another to sell power at wholesale at the lowest price.³⁴⁸

However, the reality is that the current market is not fair to independent generators; utilities fight to maintain control of their old monopolies over generation by utilizing their transmission assets.³⁴⁹ As discussed previously, utility companies commonly discriminate against competing generation firms; the utility companies use subtle mechanisms to favor their own in-house generation firms over competing generation firms attempting to use the utility’s transmission lines.³⁵⁰ While this is prohibited both by law and regulation, it is difficult to prove; the injured generating firm often does not even bother to file a complaint with the FERC, because they know the chances of the complaint being successful—let alone profitable to litigate—would be slim.³⁵¹ Moreover, much of the discrimination exploits small loopholes in the FERC pricing provisions, making it within the letter, if not the spirit, of the rules.³⁵² In sum, this sort of “cheating” by utility companies to favor their own in-house generators is easy to do, and hard for the FERC to detect and stop.³⁵³

Furthermore, this discrimination has a large effect on competition in the energy market. Independent generators are sometimes charged more than utility-owned generation firms, and they often have their access to

³⁴⁸ See 15 U.S.C. § 79z-5a(a)(1) (2004); 16 U.S.C. § 824a-3 (2004).

³⁴⁹ See generally F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285 (1999).

³⁵⁰ See *id.* at 32-38; STANDARD MARKET DESIGN ACTIVITIES, *supra* note 188, at 2.

³⁵¹ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 32-38 (1999).

³⁵² See *id.*

³⁵³ See *id.*

transmission lines effectively limited.³⁵⁴ This makes it difficult to compete in the energy market. Furthermore, independent generators widely perceive the market in its current state to be unfair.³⁵⁵ As the FERC notes, this perception in and of itself has a negative effect on the development of a competitive energy market.³⁵⁶ In short, the ability of utilities to continue to exert some control over transmission assets is, in part, limiting the growth of competition in the generation sector.

C. *An Analysis of House Bill 6: The Meaning and Effects of Section 1241*

With House Bill 6, Congress hopes to encourage participation in Regional Transmission Organizations by providing higher rates of return on transmission assets held by RTOs.³⁵⁷ Specifically, Section 1241 of the House Bill 6 Conference Report amends the Federal Power Act (“FPA”) to add Section 218.³⁵⁸ First, it will be seen that Section 218(a) requires that the FERC create a new rule that gives higher rates of return for power transmission in certain situations that Congress feels would enhance the efficiency and the reliability of the power grid.³⁵⁹ Next, it will be shown that Section 218(b) makes clear Congress’ belief that using this new rule to encourage RTOs will increase the efficiency and reliability of the power grid.³⁶⁰ Finally, it will be asked whether the method proposed in Section 1241(a) and (b) will actually increase RTO formation.

1. Section 218(a): Incentive-based Rates

Subsection (a) is entitled “Rulemaking Requirement;” and that is exactly what it does: requires the FERC to create a new rule regarding incentive-based transmission rates.³⁶¹ It will be analyzed piece by piece below.

The subsection begins, “Within [one] year after the enactment of this section, the Commission shall establish, by rule”³⁶² First and most importantly, this shows the new incentive-based rates are not going to be

³⁵⁴ See *id.* at 64-70.

³⁵⁵ See *id.* at 68-70.

³⁵⁶ *Id.*

³⁵⁷ See H.R. CONF. REP. NO. 108-375, at 280-81 (Energy Policy Act of 2003). For the exact text of the provisions, see *supra* at Part II.C.

³⁵⁸ See *id.*

³⁵⁹ See *id.*

³⁶⁰ See *id.* at 281.

³⁶¹ See *id.* at 280.

³⁶² *Id.*

set by Congress; they will instead be set by “the Commission,” the FERC.³⁶³ This means that many of the details for this rate will be left to the determination of the FERC, though within the guidance provided by Congress. Second, this language shows that the implementation of such a rule by the FERC is mandatory, not optional. The statute says the FERC “shall establish” this rule, not “may establish.” Furthermore, recall that the title of the Section 218(a) is “Rulemaking *Requirement*.” The FERC must issue this rule.³⁶⁴

It goes on to read, the FERC shall establish “incentive-based (including, but not limited to performance-based) rate treatments for transmission of electric energy . . .”³⁶⁵ This provision tells the FERC what should be covered by this new rule: incentive-based rates. First, neither the phrase “incentive-based” rates nor “performance-based” rates are defined in this section or anywhere else in the Conference Report.³⁶⁶ However, the phrase “incentive-based rates” is of common use in the electrical industry and the FERC, where it is taken to mean a higher rate of return given to transmission owners for the purpose of encouraging firms to build more transmission lines, or organize in a way favored by the FERC.³⁶⁷ Furthermore, Congress indirectly gives more definition to these phrases in Section 218(a)(1)-(4), when it discusses what it believes the incentive-based rates should accomplish.³⁶⁸

Next, the bill says this rate should cover electricity transmitted “. . . in interstate commerce by public utilities . . .”³⁶⁹ This is no surprise; it is simply a restatement of the FERC’s current jurisdiction over power. Transmission that is purely intrastate—though this is rare—will still be governed by the state power commissions and not the FERC.³⁷⁰

It goes on to state that these incentive-based rates should be created, “for the purpose of benefiting consumers by ensuring reliability and reducing the cost of delivered power by reducing transmission congestion.”³⁷¹ This provision contains the goal of the new rule, as Congress sees it: to increase the reliability and efficiency of the power grid. The reference to “reducing the cost of delivered power by reducing transmission congestion”

³⁶³ See H.R. CONF. REP. NO. 108-375, at 280.

³⁶⁴ *Id.* The FERC has said, however, that it wants this authority, so it is unlikely that coercion by Congress is necessary to get such a rule implemented. See ELECTRIC RELIABILITY, *supra* note 13, at 6-7.

³⁶⁵ H.R. CONF. REP. NO. 108-375, at 280.

³⁶⁶ See generally *id.*

³⁶⁷ See ELECTRIC RELIABILITY, *supra* note 13, at 6-7.

³⁶⁸ See H.R. CONF. REP. NO. 108-375, at 280-81.

³⁶⁹ *Id.*

³⁷⁰ See *id.*; see also ELECTRIC RELIABILITY, *supra* note 13, at 1-2, 6.

³⁷¹ H.R. CONF. REP. NO. 108-375, at 280.

is at its heart an argument for efficient transportation of power.³⁷² Many power lines are congested, but often there are not enough incentives to build more lines in the area, because firms are under compensated for their use in congested areas.³⁷³ This is complicated by the inability in many cases for the transmission firm to set a higher price on transmission through a congested area.³⁷⁴ By reducing congestion, the power grid would operate more efficiently and consumers would eventually receive power at a lower price.³⁷⁵

Subparts (1)-(4) lay out what Congress requires the new incentive-based rates to encourage to achieve the twin goals of reliability and efficiency in the power grid.³⁷⁶ Subparts (1) and (2) are most important for this note.³⁷⁷ Subpart (1) states that the new rates should be used to “promot[e] capital investment in the enlargement, improvement, maintenance and operation” of transmission facilities. Subpart (2) says this new rate should be high enough to attract “new investment of transmission facilities.” Taken together, these two provisions justify the use of higher rates of return for the transmission of power in cases where new transmission facilities need to be built, or old transmission facilities maintained. Furthermore, these two provisions by themselves would probably have been enough for the FERC to provide legitimately these special rates to RTOs.³⁷⁸

2. Section 218(b): Incentives for Regional Transmission Organization Formation

Section 218(b), in general, demonstrates Congress’ intent that the RTO be encouraged as an organization that increases the reliability and efficiency of the power grid.³⁷⁹ It is entitled, “Additional Incentives for RTO Participation.”³⁸⁰

³⁷² See ELECTRIC RELIABILITY, *supra* note 13, at 6-9.

³⁷³ See *id.* at 5-9.

³⁷⁴ See *id.*

³⁷⁵ See *id.*

³⁷⁶ See H.R. CONF. REP. NO. 108-375, at 280-81.

³⁷⁷ Subpart 3 encourages the deployment of new transmission technologies; Subpart 4 has to do with compliance with future mandatory reliability standards. Neither has much to do with RTOs.

³⁷⁸ The FERC has requested similar authority in the past to encourage RTO formation, and even without Section 218(b) would probably have used the 218(a) authority to encourage RTO formation, on the theory that they increase reliability and reduce congestion. See *generally* ELECTRIC RELIABILITY, *supra* note 13, at 6-9.

³⁷⁹ See H.R. CONF. REP. NO. 108-375, at 281.

³⁸⁰ *Id.*

It begins, “In the rule issued under this section.”³⁸¹ There is only one such rule in Section 1241 of the Energy Policy Act, and that is the newly created Section 218(a) of the FPA.³⁸² Thus, 218(b) is giving guidance to the FERC on the implementation of the rule under 218(a), above.

It continues that, “the Commission shall [make the rule], to the extent within its jurisdiction.”³⁸³ First, the Commission is, again, the FERC.³⁸⁴ Second, their jurisdiction is, again, electricity transmitted in interstate commerce; if this was unclear at all, it was restated in 218(a).³⁸⁵

Furthermore, this new rule issued by the FERC should, “provide for incentives for each transmitting utility or electrical utility that joins a [RTO] or [ISO].”³⁸⁶ First of all, Congress defines RTOs elsewhere in the act; this definition tracks exactly the definition of RTOs given by Order 2000.³⁸⁷ Next, “transmitting utility” and “electrical utility” are of common use in the electrical industry; in this context, they would mean any firm that either exclusively owns transmission assets (a “transmitting utility”), or any firm that owns both transmission and generation assets (an “electrical utility”).³⁸⁸ Finally, the provision says the FERC should provide RTOs with “incentives.”³⁸⁹ As a preliminary matter, it would seem these incentives are listed below in subparts (1) through (6).³⁹⁰ However, it should be noted that, in addition to the incentives laid out in (1) through (6), the FERC should also create the rule to give RTOs the incentives laid out in provisions (1) through (4) of 218(a). This section is, after all, entitled, “*Additional Incentives for RTO Participation*.”³⁹¹ An RTO can receive incentives both for, say, expanding transmission capacity under 218(a), along with receiving incentives to recover the costs of RTO formation under 218(b)(1) through (6).³⁹²

Finally, subparts (1) through (6) lay out general situations in which Congress feels RTOs should be compensated with the new, higher rates.³⁹³ In sum, these provisions say RTOs should be compensated for the costs of organizing and participating in an RTO. These include costs of developing

381 *Id.*

382 *Id.*

383 *Id.*

384 *See* F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285.

385 *See* H.R. CONF. REP. NO. 108-375, at 280.

386 *Id.* at 281.

387 *See* 18 C.F.R. § 35.34(b)(1) (2003). For a definition of this definition of an RTO, see *supra* Part I.C.3.

388 *See generally* F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285.

389 *See* H.R. CONF. REP. NO. 108-375, at 281.

390 *See id.*

391 *See id.* (emphasis added).

392 *See id.*

393 *See id.*

the proposal, costs of coordinating transmission, costs of planning grid expansion, costs of assuring reliability, and so on.

Generally, the 218(b) situations in which the rate should be used are different from the 218(a) situations in one simple respect. Section 218(a) encourages the expansion and reliability of the grid by anyone; 218(b) encourages the expansion and reliability of the grid by RTOs specifically.³⁹⁴ They are not mutually exclusive, but instead 218(b) simply provides further guidance to the FERC on how it should create the new rule set out in section 218(a).

3. Effectiveness: Will Sections 218(a)-(b) Encourage RTO Formation?

The effectiveness of the above provisions in increasing RTO participation will depend both on how the FERC crafts the rule, and how receptive transmission owners are to incentives in transmission. While both of these factors are uncertain, it seems likely that the new rates will encourage RTO participation to some significant extent.

First, how much Section 1241 encourages RTO participation depends upon how the FERC writes the rule governing the incentive-based rates. This, of course, is partially unknown. However, a few things can be discerned. To start with, the FERC must follow at least the general guidelines set out in Section 1241. At a minimum, this will produce a plan that somehow allows RTOs to charge additional amounts for transmission simply by virtue of being an RTO; additionally, it should give the RTOs a premium for creating new power lines. Second, the rates involved can probably be filled in by statements from the FERC. In January, 2003, the FERC proposed a similar plan to the one contained in Section 1241.³⁹⁵ In this plan, the FERC proposed a 1% return-on-equity incentive for new RTO transmission projects.³⁹⁶ Furthermore, transmission assets owned by an RTO would generally receive a bonus of between .5% and 2% return on equity over and above what is recovered by a non-RTO transmission owner.³⁹⁷ Furthermore, the FERC proposed an additional return on equity of up to 14% on some specific projects.³⁹⁸

These numbers seem significant, but how much the industry will respond to these incentives is impossible to say without economic analysis

³⁹⁴ See H.R. CONF. REP. NO. 108-375, at 280-81.

³⁹⁵ ELECTRIC RELIABILITY, *supra* note 13, at 7.

³⁹⁶ *Id.*

³⁹⁷ *Id.*

³⁹⁸ *Id.*

well beyond the scope of this note. However, a good indicator might be the industry reaction to the proposed plan. That reaction is generally positive.³⁹⁹ Most industry members believe that utilities are systematically under compensated for transmission assets, which translates into a need for higher rates of return.⁴⁰⁰ Several in the industry have spoken out specifically in favor of an incentive-based plan, such as the one contained in Section 1241 of the House Bill 6 Conference Report.⁴⁰¹ The FERC, at least, believes that this support will translate into additional RTO participation.⁴⁰² This result seems likely.

Furthermore, there are other provisions of House Bill 6 that will boost RTO participation—namely, the Sense of Congress provision that encourages all utilities to join RTOs.⁴⁰³ While the Sense of Congress provision carries no weight of law, it does tell the electrical industry that Congress believes some sort of coordination is necessary to run the modern power grid. Furthermore, by extension, the Sense of Congress provision tells utilities that if they do not voluntarily comply, it is likely Congress will take further regulatory action. This uncertainty inherent in the veiled threat of future and unknown Congressional legislation will probably be enough of a motivating factor for many energy companies to voluntarily comply with Order 2000 and form RTOs.

In other words, House Bill 6 contains both a large carrot (incentive-based rates), and a poorly concealed stick (the implied threat of additional legislation if there is not voluntary compliance). The combination of these two seems very likely to increase RTO participation by some significant margin.

D. *Piecing Together the Broken Grid: Will RTOs Help?*

Assuming that House Bill 6 does encourage RTO participation, the impact of Section 1241 on the efficiency and reliability of the power grid will be determined in large part by how much of an impact RTOs have on the problems facing the electricity industry. RTOs will indeed help to piece

³⁹⁹ See F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285; ELECTRIC RELIABILITY, *supra* note 13, at 7; OPTIONS FOR ELECTRIC TRANSMISSION INFRASTRUCTURE IMPROVEMENTS 7 (2003) Ilic & Hyman, *supra* note 174, at 28; Radford, *supra* note 174, at 4;; Spiwak, *supra* note 33, at 38.

⁴⁰⁰ See ELECTRIC RELIABILITY, *supra* note 13, at 7; Ilic & Hyman, *supra* note 174, at 28; Radford, *supra* note 174, at 4; Spiwak, *supra* note 33, at 38.

⁴⁰¹ See, e.g., Spiwak, *supra* note 33, at 38.

⁴⁰² See ELECTRIC RELIABILITY, *supra* note 13, at 7.

⁴⁰³ H.R. CONF. REP. NO. 108-375, at 275.

back together the broken grid, but to a lesser degree than some regulators perhaps believe.

Specifically, RTOs will do much to fix two of the main problems plaguing the power industry, namely the lack of investment in the power grid and the lack of coordination between transmission facilities. Additionally, by further separation of transmission and generation ownership, RTOs will also help to fix the lack of competition in the electrical industry. However, because RTOs will often not be fully independent of their underlying utility companies, a fully competitive market will not be achieved.

1. RTO Effects on Transmission Investment

First, the provisions of House Bill 6 will create significant new incentives to expand transmission capacity in the power grid. It will do this in two main ways. First, House Bill 6 would fix the under compensation of the FERC's formula for transmission pricing. Second, House Bill 6 would reduce uncertainty regarding the future regulatory structure of the industry; and further, it would give a premium for the uncertainty that remains.

First, House Bill 6 would help to fix the under compensation of the FERC's formula for pricing transmission. As mentioned above, Order 888's requirement that each company produce a single tariff for the use of all of its transmission lines requires a transmission firm to charge the same amount for transmission through both congested and un-congested power lines.⁴⁰⁴ This under compensates the transmission firm for the congested lines.

House Bill 6 would help to fix this problem in two ways. First, it orders the FERC to write a rule that includes incentives to reduce transmission congestion.⁴⁰⁵ In fact, this will probably amount to building new transmission lines in the congested area; and House Bill 6 specifically states that the new rule should contain incentives for the construction of new transmission.⁴⁰⁶ Second, House Bill 6 encourages transmission facilities to join RTOs by providing additional incentives to utilities that join RTOs.⁴⁰⁷ RTOs are better able to deal with congestion, because an RTO can increase prices on congested lines under Order 2000, something a normal utility cannot do.⁴⁰⁸ Thus, to the extent that transmission firms felt they were under compensated for the costs of joining an RTO by the FERC's rate struc-

⁴⁰⁴ For a discussion of this problem, see *supra* Part III.B.1.

⁴⁰⁵ See H.R. CONF. REP. NO. 108-375, at 280-81.

⁴⁰⁶ See *id.* at 280.

⁴⁰⁷ See *id.* at 280-81.

⁴⁰⁸ See 18 C.F.R. § 35.54(k)(2) (2003); see also F.E.R.C. Order 2000, Regional Transmission Organizations, 89 F.E.R.C. 61,285, at 332.

ture, House Bill 6 will allow them to capture efficiencies they were otherwise forgoing. The increased participation in RTOs, then, will lead to a more coherent pricing scheme under the current regulatory regime. Since RTOs will more correctly price congested transmission lines, we will open this congestion to being fixed by normal market forces.⁴⁰⁹

Next, the provisions of House Bill 6 will also help to encourage investment in the power grid by reducing uncertainty in the power industry. As mentioned previously, since the passage of EPACT in 1992 there has been great uncertainty in the power industry regarding how transmission will be regulated in the future.⁴¹⁰ Human beings by their nature are risk adverse, and require compensation for such uncertainty that the FERC has not included in its formulas.⁴¹¹

First, House Bill 6 will reduce the uncertainty in the industry. The Sense of Congress provision makes clear that Congress intends the industry to be governed by RTOs; this will give utility companies insight into the future structure of the industry they were previously lacking.⁴¹² More importantly, a Congressional mandate for the FERC to set out incentive-based rates will put a firm policy in place regarding the prices of transmission that, however the FERC ends up pricing the transmission, will at least be definite. This will reduce the chance that the FERC might do something unusual in the future that has the effect of reducing the value of investments in transmission assets. In other words, it will reduce uncertainty and thus increase investment.

Furthermore, House Bill 6 increases compensation for new transmission, which helps to compensate for any uncertainty that remains. By providing for increased rates for the construction of new transmission, the incentives in House Bill 6 could help to overcome the remaining uncertainty premium on investment in transmission assets.

Thus, by providing incentives for new transmission and encouraging RTOs, House Bill 6 will be of large help in increasing investment in transmission. This should significantly increase the reliability of the power grid.

2. RTO Effects on Transmission Coordination

RTOs will also encourage coordination in the power grid. By creating larger conglomerate RTOs out of the tiny fractured pieces of grid that exist

⁴⁰⁹ Specifically, the price of transmission in the areas of congested lines should rise; this should encourage the area's RTO to build more transmission lines in the congested portion of the grid.

⁴¹⁰ For a discussion of the problem of under investment due to uncertainty, see *supra* Part III.B.1.

⁴¹¹ For a discussion of risk adversity, see *supra* note 335.

⁴¹² H.R. CONF. REP. NO. 108-375, at 275.

today, RTOs reduce the transaction costs and externalities that make it more difficult to repair and maintain the power grid, as well as send power efficiently from place to place.

First, increased participation in RTOs can reduce several externalities that make it more difficult to repair and maintain the power grid, as well as send and receive power.⁴¹³ To begin with, RTOs make it easier to coordinate the repair and management of the power grid. As mentioned previously, problems result if multiple utility companies happen to take sections of their grid offline at the same time.⁴¹⁴ Put another way, taking one section of the grid owned by Utility A offline causes a negative externality on other sections of the grid, perhaps owned by Utility B, by increasing the burden on B's section of the grid.⁴¹⁵ But because this extra burden on Utility B does not cost anything for A, inefficient behavior can result.⁴¹⁶ An RTO, however, is in charge of the maintenance of a large section of the grid on its own; it thus internalizes the costs of these externalities.⁴¹⁷ The result is a more efficient schedule of maintenance and repair due to the coordination provided by the RTO.

Another externality RTOs will help eliminate is the problem of "loop flows." As previously mentioned, this problem results when electricity fails to follow the transmission path for which it was contracted, and instead invades a nearby portion of another transmission firm's grid.⁴¹⁸ This second transmission owner is usually not compensated. Once again, however, RTOs will reduce this problem by internalizing the negative externalities for all transmission firms in their geographic areas. This will help the industry to price transmission of power more easily and accurately.

Furthermore, RTOs will reduce the transaction costs associated with the current electrical transmission industry.⁴¹⁹ First, it is less expensive to contract with a single large transmission firm, such as an RTO, for the

⁴¹³ "Externality" is an economic term generally referring to any cost or benefit of a transaction that is not gained or lost by the parties of the transaction. See COOTER & ULEN, *supra* note 293, at 40-42. Externalities can be either negative or positive. See *id.* A classic example of a negative externality is air pollution, put out by a factory, which creates smog in nearby neighborhoods. See *id.* A classic example of a positive externality is the benefit bees of a nearby beekeeper might provide his neighbor who owns an apple orchard. See *id.*

⁴¹⁴ For a discussion of these coordination issues, see *supra* Part III.B.2.

⁴¹⁵ See COOTER & ULEN, *supra* note 293, at 40-42.

⁴¹⁶ See *id.*

⁴¹⁷ See *id.* at 150-53.

⁴¹⁸ For a discussion of "loop flows," see *supra* Part III.B.2, as well as *supra* note 174.

⁴¹⁹ "Transaction costs" is an economic phrase referring to the costs not of providing the service or product, but instead of the exchange itself. See COOTER & ULEN, *supra* note 293, at 87-88. For instance, the costs of researching, mapping out, and calling multiple small transmission firms in control of tiny areas of the grid are transaction costs. See *generally id.* The cost the companies quote you for the service of transmitting their power, however, is not a transaction cost. See *generally id.*

transportation of power than to contract with multiple little ones. In this way, the RTO reduces the costs of sending power. Furthermore, RTOs will also reduce the so-called “pancaking” of rates. “Pancaking” occurs when power is transmitted through multiple small, utility-owned areas of the grid, and thus gets charged multiple tariffs (one for each different utility company involved in the transaction).⁴²⁰ This rate does not reflect the true cost of transporting the power from place to place. RTOs would reduce the instances of pancaking by greatly expanding the area controlled by a single entity, as well as providing additional flexibility in the rates charged to those transporting power across the RTO’s boundaries.

Therefore, House Bill 6, by increasing participation in RTOs, will increase coordination between areas of the grid. The current fractured nature of the grid creates inefficiencies due to negative externalities and increased transaction costs.⁴²¹ RTOs, by nature of their larger structures, will decrease the number of these externalities, and reduce transaction costs. This should make the transportation of power more reliable and efficient.

3. RTO Effects on Competition in the Electricity Industry

Increased RTO participation will also make competition in the electricity industry fairer by increasing the separation between ownership of transmission and generation assets.⁴²² However, this will not increase fair competition in the industry as much as some regulators hope, because many RTOs will not be truly independent of their subsidiary utilities.

First, RTOs will help make competition in the electrical industry fairer by decreasing discrimination against competing generators, by utility firms owning both transmission assets and generation assets. The current “wall” between transmission and generation assets is largely illusionary. There are strong incentives for utility companies to help their generating facilities by using the market power of their transmission assets.

However, when a utility joins an RTO, it must give up either ownership or control of its transmission assets to the RTO.⁴²³ The RTO then operates all of the transmission assets it receives from member utilities as a single unit.⁴²⁴ Furthermore, it is required to do so in a non-discriminatory manner.⁴²⁵ Under this scheme, a utility that joins an RTO no longer controls its transmission assets; it thus has much less opportunity to discriminate

⁴²⁰ For a discussion of “pancaking,” see *supra* Part III.B.2, as well as *supra* at note 174.

⁴²¹ For discussion of this issue, see *supra* Parts III.A.3, III.B.3.

⁴²² For a discussion of the lack of competition in the industry, see *supra* Part III.B.3.

⁴²³ See 18 C.F.R. § 35.34(j)(3) (2003).

⁴²⁴ See *fid.*

⁴²⁵ See *id.* § 35.34(k)(1).

against other generation facilities by limiting their access to transmission lines. This would certainly make the market more fair.

On the other hand, it will not do as much as some regulators have hoped. This is because joining an RTO does not require a utility to give up *ownership* of its transmission assets, just the *operation* of its transmission assets.⁴²⁶ How much control is given up depends on the model of RTO the utility is joining. Specifically, the “transco” model of the RTO is a for-profit company that both owns and operates the grid; but the ISO model of the RTO is a not-for-profit organization that only operates the grid for its member utility companies.⁴²⁷ Furthermore, utilities joining an ISO-RTO will usually be able to elect the independent governors that run the RTO’s transmission assets.⁴²⁸ This leaves open the question of how independent these board members really will be. If a large utility is able to elect the majority of the ISO board members, it still might be able to favor its own power generation firms.⁴²⁹ The ISO-RTO model is flawed because it may still discriminate in favor of certain member utility companies.

However, there are different, but equally troubling, worries about the “transco” model of RTO as well. Transcos are for-profit companies that own the grid in their area, but do not own any transmission assets; they are, in effect, a utility company that has sold off its power generating plants.⁴³⁰ This means that the transco has no motive to discriminate against independent power generation firms, because these independent generators are not competitors, but instead simply customers.⁴³¹ But though there are few discrimination worries with a transco, there are more fears that it will use its monopoly power over transmission to raise transmission prices.⁴³² This increase, though it would not be discriminatory, would raise prices on end consumers to higher levels than is efficient. Of course, the price of transco transmission could simply be more closely watched and regulated by the FERC; however, that will probably have an effect on the transco’s ability to set flexible prices for such legitimate purposes as, for instance, reducing congestion of power lines.

Thus, both models have their flaws, and the FERC tends to overlook them. ISOs, because they do not require separate ownership of generation and transmission, will still leave opportunities for discrimination. The FERC is too confident in their ability to regulate these ISOs into true inde-

⁴²⁶ See *id.* § 35.34(j)(3).

⁴²⁷ For a discussion of the different models of RTOs, see *supra* Part I.C.3.

⁴²⁸ See Spiwak, *supra* note 33, at 40.

⁴²⁹ See *id.*

⁴³⁰ See *id.* at 38.

⁴³¹ See generally *id.*

⁴³² See *id.* at 40-42.

pendence, especially after recently failing in that same task post-Order 888. Transcos, on the other hand, do require separate ownership of generation and transmission assets; but transcos will be a profit-motivated monopoly that is sure to attempt to raise prices above what they would be in a free market. The FERC, in this case, is too confident of its ability to regulate the prices of the transcos without the transco losing necessary price flexibility.

However, either the ISO or the transco model of RTO is still a step above the current situation in the market. By encouraging RTOs, then, House Bill 6 will increase competition in the electrical industry. Regulators must keep in mind, however, that they are still dealing with a monopoly in transmission. Until new technology somehow eliminates the natural monopoly of the power-grid owners, perfect competition will never be achieved.

CONCLUSION

The blackout of August, 2003 has proved to the United States that it must finally address the problems plaguing the power industry. Years of poor and uncertain regulation have resulted in a confused power industry, and a fractured and malnourished power grid. The incentives proposed by House Bill 6 to increase transmission investment and encourage the formation of Regional Transmission Organizations will help to fix these problems. More utilities will join RTOs as a result of the incentives provided in House Bill 6, and RTOs will significantly increase investment and coordination in the power industry. Furthermore, RTOs will increase competition in the budding international market for power generation; however, for so long as there remains a natural monopoly in transmission, perfect competition will never be achieved.

*Michael Coyn Mateer**

* George Mason University School of Law, Juris Doctor Candidate, May 2005; Senior Research Editor, *GEORGE MASON LAW REVIEW*, 2004-05; Vanderbilt University, B.S., Political Science, Economics, May 2001. I wish to thank the members of *George Mason Law Review* for their work in editing my article; my parents, for their continued love and support; and most of all, my loving and brilliant wife Erin Street Mateer for her skilled editing, her insightful comments, and her never-ending faith and optimism. The views expressed in this article are solely those of the author.