

## NOTES

### DEREGULATING THE TRANSMISSION OF ELECTRICITY: WHEELING UNDER P.U.R.P.A. SECTIONS 203, 204, AND 205

#### INTRODUCTION

In the past twenty-five years, several conditions have prompted the development of small independent power producers (I.P.P.'s).<sup>1</sup> The Arab oil embargo in the mid-70s, coupled with the inflationary costs of expanding and maintaining the generating capacity of prior years resulted in skyrocketing fuel costs.<sup>2</sup> Further, because of the escalating costs associated with constructing a large generation plant as well as the negative environmental implications of traditional electricity generation,<sup>3</sup>

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1. Small independent power producers include, but are not limited to, small facilities that employ renewable resources such as hydro-electric energy, wood energy, geothermal energy or biomass as a primary fuel. See generally Oppedahl & Tardurvo, *Wind Energy Conversion*, 5 HARV. ENVTL. L. REV. 431 (1981) (discussing wind turbine generation systems); Huss, Richmond & Badger, *Alternative Generation Technologies: Can They Compete?*, PUB. UTIL. FORT., Mar. 15, 1984, at 17, 21 (discussing production of solar power).

In the United States, there are approximately 3500 electric utilities. The public (local and federal) owns the vast majority—2,255. The publicly owned utilities account for 13.5% of the total customers and 16.4% of total kilowatt hour sales of the country's electric utility industry. Comment, *A Proposal to Increase Access to Electric Transmission Services*, 20 HARV. J. ON LEGIS. 227, 228 (1983) (citing OFFICE OF ELEC. POWER REGULATIONS, U.S. FED. ENERGY REGULATIONS COMMISSION, *Power Pooling in the United States* 5 (1981)). Although the public owns most utilities, privately owned utilities generate the most electricity. A mere 284 of these concerns serve 77.1% of all customers and account for 78.2% of total K.W.H. sales in the United States. Generally, private stockholders and holding companies own these utilities. A. FINDER, *THE STATES AND ELECTRIC UTILITY REGULATION* 5-6 (1977) (citing FEDERAL POWER COMMISSION, *STATISTICS OF INVESTOR OWNED UTILITIES IN THE UNITED STATES* (1975)). Perhaps the least significant generator owners are cooperatives. These account for 9.4% of all customers and 5.5% of the total K.W.H. sales. *Id.*

2. Hamilton, *Standard Contracts and Prices for Small Power Producers*, 11 WM. MITCHELL L. REV. 421, 422 (1985).

3. See generally Davis, Kurtz, Leape & Magill, *The Clean Air Act Amendments of 1977: Away From Technology Forcing?*, 2 HARV. ENVTL. L. REV. 1, 68-89 (1977); Del Duca, *The Clean Air Act: A Realistic Assessment of Cost-Effectiveness*, 5 HARV. ENVTL. L. REV. 184, 196-203 (1981); Flax, *Radioactive Waste Management*, 5 HARV. ENVTL. L. REV. 259, 259-95 (1981); Freidland, *The New Hazardous Waste Management System: Regulation of Wastes or Wasted Regulation?*, 5 HARV. ENVTL. L. REV. 89, 89-130 (1981); Green, *Sulfur Emission and Acid Rain: A Least-Cost Approach to the Problem*, PUB. UTIL. FORT., Dec. 8, 1983 at 46; Trisko, *Acid Precipitation: Causes, Consequences, Controls*, PUB. UTIL. FORT., Feb. 3, 1983 at 19; *The Acid-Rain Stalemate*, ELECTRICAL WORLD, Dec. 1983 at 9.

utilities had little incentive to build large generating plants.<sup>4</sup>

Congress responded to the energy crisis of the 70s by passing President Carter's comprehensive National Energy Plan.<sup>5</sup> One section, the Public Utility Regulatory Policies Act (P.U.R.P.A.)<sup>6</sup> required utilities to purchase cogenerated power.<sup>7</sup> By passing P.U.R.P.A., Congress meant to decentralize the production of power, thereby making it easier for small power producers to enter the market.<sup>8</sup> The ultimate congressional

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4. P. JOSKOW & R. SCHMALENSEE, *MARKETS FOR POWER, AN ANALYSIS OF ELECTRIC UTILITY DEREGULATION* 223-24 & n.12 (1983).

Past practice has been to increase the pace of new power plant construction, but discouraging economic and regulatory developments have made some utilities reluctant to embark upon a new wave of plant construction. Instead, they are examining energy generating alternatives in an attempt to scale back demand projections and defer the need for expensive new power plants. Smartt, *Utilities Found to be Interested in Energy Alternatives*, PUB. UTIL. FORT., Nov. 10, 1983 at 4. See also Ray, *The Megawatt Debate*, ELECTRICAL WORLD, Oct. 1983 at 4 (estimating that the cost for construction of generating plants needed to satisfy growing demand for electricity by 2000 would exceed one trillion dollars in 1982 dollars).

5. The National Energy Plan contained five laws, four of which were the Energy Tax Act of 1978, Pub. L. No. 96-618, 92 Stat. 3174 (codified in scattered sections of 26 U.S.C. (1982)); the National Energy Conservation Policy Act, Pub. L. No. 95-619, 92 Stat. 3206 (codified in scattered sections of 42 U.S.C. and 12 U.S.C. (1982)); the Power Plant and Industrial Fuel Use Act of 1978, Pub. L. No. 95-620, 92 Stat. 3289 (codified in 40 U.S.C. §§ 872-877, 885 and scattered sections of 16 U.S.C. (1982)); and the Natural Gas Policy Act, Pub. L. No. 95-621, 92 Stat. 3351 (codified in 15 U.S.C. §§ 3301-3432 (1982)).

6. The fifth law of the National Energy Plan was the Public Utility Regulatory Policies Act of 1978 (P.U.R.P.A.), Pub. L. No. 95-617, 92 Stat. 3117 (codified in scattered sections of 16 U.S.C. and 15 U.S.C. (1982)).

7. Cogeneration is the simultaneous production of two forms of energy. The most common relationship is between electricity and process steam. Utilities produce heat and power by the sequential use of energy from one fuel source—the reject heat of one process becomes the energy input into a subsequent process. Comment, *A Look at Federal & State Cogeneration and Small Power Production Regulations*, 3 J. ENERGY L. & POL'Y 29, 329-33, (1982).

8. Congress characterized the insecurity of the U.S. oil supply as a "fundamental" problem. Initially, Congress cited the oil-trade deficit as prompting reconsideration of its energy policies. The importation of fuel rose between 45% and 50% from 23% in only seven years (1970 to 1977). Congress also considered the twofold increase of U.S. demand (from 8.5 to 17.4 million barrels per day (m.m.b.d.)) as further evidence of the need for energy policy reevaluations. In addition, the Federal Energy Administration predicted oil demand would rise from 17.4 m.m.b.d. in 1976 to 21.1 m.m.b.d. in 1980, to 22.8 m.m.b.d. in 1986 and 24.9 m.m.b.d. in 1990. Given the increased dependence on foreign oil, this increased consumption suggested that imports would reach 10.2 m.m.b.d. in 1980 (48% of consumption), 11.5 m.m.b.d. in 1985 (58% of consumption), and 14.5 m.m.b.d. in 1990 (58% of consumption). H.R. REP. NO. 543, 95th Cong., 2d Sess. 6, reprinted in 1978 U.S. CODE CONG. & ADMIN. NEWS 7673, 7673-74. Congress stated that "such an increase in our reliance on oil imports would greatly constrain our foreign policy and could do considerable damage to our economy." *Id.* The House report mentioned that in addition to the rising prices, the world oil market would be extremely scarce by the mid-1980s. *Id.* at 7675.

Congress also outlined major themes and specific goals of P.U.R.P.A. The three themes were energy conservation, conversion to coal, and incentives to production. The six goals were: 1) to

goal was to diminish American dependence on foreign oil.<sup>9</sup>

Although Congress wrote a pervasive statutory scheme aimed at deregulating the electricity industry, it failed to give the Federal Energy Regulatory Commission (F.E.R.C.) and the various State Public Utilities Commissions (P.U.C.'s) the requisite authority to foster an efficient competitive market.<sup>10</sup> This Note will critically evaluate the pertinent provisions of P.U.R.P.A., as well as how Congress could amend P.U.R.P.A. to achieve its stated goal.<sup>11</sup> Amending the statute is necessary because, given the history and the nature of the electricity industry, neither the F.E.R.C. nor industrial states possess the proper authority to require one utility to "wheel"<sup>12</sup> on behalf of another.

## I. HISTORY

Before discussing P.U.R.P.A.'s deregulation and the events giving rise to it, an understanding of the nature of the industry prior to regulation is necessary: one must be wary of deregulation that nurtures the same environment giving rise to the regulation in the first instance.

### A. *The Electricity Industry—A Primer*

Unlike coal, natural gas, and oil, electricity is a manufactured form of energy.<sup>13</sup> While the discovery of electricity occurred in the 1500s,<sup>14</sup> it did not become a popular source of energy until the 1880s.<sup>15</sup> The basic

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reduce the average growth rate of energy consumption to 2% per annum; 2) to reduce the oil imports level to less than six million m.m.b.d.; 3) to achieve a 10% reduction in gasoline consumption from the 1977 level; 4) to retrofit for energy conservation purposes 90% of the residential and commercial buildings in the United States; 5) to increase coal production by at least 400 million tons annually over 1976 levels; and 6) to use solar energy in more than two and a half million homes. See L. BUCK & L. GOODWIN, *ALTERNATIVE ENERGY: THE FEDERAL ROLE* ¶ 7-11 (1982); Federal Energy Regulatory Commission Final Rule (for P.U.R.P.A. regulations) 18 C.F.R. § 292.301 to 602 (1984).

9. See *supra* note 8.

10. See *infra* notes 85-91 and accompanying text.

11. See *infra* notes 76-150 and accompanying text.

12. Wheeling is a method of transferring electric power. See *infra* note 56 and accompanying text.

13. W. FOX, *FEDERAL REGULATION OF ENERGY* 749 (1983).

14. Although the Greeks were the first to discover electric phenomena, William Gilbert is regarded as the first serious student of electricity. He studied the relation of static electricity to magnetism in the 1500s. 4 *ENCYCLOPEDIA BRITANNICA* 429 (15th ed. 1986).

15. Two events gave rise to the increased use of electricity. The first was an exhibition by Zenobe Gramme in 1873 in which he proved that electricity could be transmitted from one place to another by overhead conductors. This event, combined with Thomas A. Edison's invention of the

process by which electricity is manufactured has remained unchanged since that time.<sup>16</sup> A primary fossil fuel is burned which produces heat, which in turn produces steam. The steam is then pumped into a turbine which rotates a generator, and the generator produces electricity.<sup>17</sup>

The advent of commercial transformers changed the electricity industry and was pivotal in the development of alternating current. Commercial transformers also expedited the transmission and distribution of high-voltage electricity to larger areas at greater distances, thereby increasing the supply of electricity. Demand rose commensurately, and the electricity industry soon became essential to the economic development of the country.<sup>18</sup>

### *B. History of the Electricity Industry in the United States*

In the early 1900s, electric utilities obtained long term franchises<sup>19</sup> from cities and states. Governments encouraged the development of utilities by offering substantial tax breaks, bond guarantees, and land grants.<sup>20</sup> These franchises gave electric utilities the authority to provide service in all or part of the grantor's jurisdiction. Before the development of high voltage distribution systems, generators were small and competition for franchises intense, thereby decreasing the cost of electricity.<sup>21</sup> The fierce competition among firms, therefore, served the public interest.

One major weakness in the industry's development was the unprofitability of serving rural areas. Because there were substantially more customers in a city block of New York City than in the same space in rural Kansas, it was much more profitable to serve the New York market than the Kansas market. When electricity entrepreneurs eventually did serve the rural areas, the service was inconsistent and inefficient and blackouts

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incandescent lamp in 1879 and his construction of the first central power station and distribution system in New York City in 1881, generally marks the introduction of electricity into homes, businesses, and factories. *Id.* at 430.

16. W. FOX, *supra* note 13, at 750.

17. *Id.*

18. A. FINDER, *supra* note 1, at 3; *see also* P. JOSKOW & R. SCHMALENSSEE, *supra* note 4 at 3-4.

19. A franchise in the legal sense is a government grant to perform a service or function not available to the general public. BLACK'S LAW DICTIONARY 592 (5th ed. 1979). *See also* A. FINDER, *supra* note 1, at 3.

20. A. FINDER, *supra* note 1, at 3.

21. *Id.*

and brownouts were more prevalent in rural than in urban areas.<sup>22</sup> This inefficiency of the system was one of the factors prompting Congress to enter the field.<sup>23</sup>

In 1920 Congress passed the Federal Power Act.<sup>24</sup> The Act's purpose, however, was not to encourage a more equitable division of electricity.<sup>25</sup> Rather, the Act only gave the Federal Power Commission (F.P.C.) authority to license hydroelectric power plants on the major rivers of the United States.<sup>26</sup> During Franklin Roosevelt's administration Congress created Part II of the Federal Power Act<sup>27</sup> and gave the F.P.C. the additional power to regulate the transmission of electric energy.<sup>28</sup>

Congress delegated to the F.P.C. the authority to regulate the interstate sale of power for two reasons. First, given the monopolistic nature of the industry, Congress hoped to keep prices down. Second, Congress wanted to ensure adequate electrical service nationwide.<sup>29</sup> Although Congress originally gave the F.P.C. jurisdiction over the transmission of electricity, demand generally met supply, obviating the need for F.P.C.

22. S. BREYER & P. MACAVOY, *ENERGY REGULATION BY THE FEDERAL POWER COMMISSION* 1-4 (1974).

23. See, e.g., *INTERSTATE MOVEMENT OF ELECTRIC ENERGY*, S. Doc. No. 238, 71st Cong., 3rd Sess. (1931); *ELECTRIC LIGHT & POWER IN WAIMEA AND KEKAHA*, Hawaii, S. Rep. No. 378, 70th Cong., 1st Sess. (1928); *UTILITY CORPORATIONS*, S. Doc. No. 92, pts 1-76, 70th Cong. 1st Sess. (1928) (investing performance of utilities nationwide); *ELECTRIC POWER INDUSTRY SUPPLY OF ELECTRICAL EQUIPMENT AND COMPETITIVE CONDITIONS*, S. Doc. No. 46, 70th Cong., 1st Sess. (1928); *ELECTRIC POWER INDUSTRY CONTROL OF POWER COMPANIES* S. Doc. No. 213, 69th Cong., 2nd Sess. (1927).

24. 16 U.S.C. §§ 791a-828c (1982).

25. In 1902, Congress passed the Reclamation Act ch. 1093, 32 Stat. 38 (1902). The Act's major goal was to irrigate the desert lands in the West by constructing dams. Although the dams produced electricity, it was several years before anyone thought to sell the valuable byproduct. W. FOX, *supra* note 13, at 754.

26. W. FOX, *supra* note 13, at 754; see also *supra* note 25.

27. 16 U.S.C. § 824-8241 (1982). Section 824 (b)(1) provides in pertinent part:

(1) The provisions of this subchapter shall apply to the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce, but except as provided in paragraph (2) shall not apply to any other sale of electric energy or deprive a State or State commission of its lawful authority now exercised over the exportation of hydroelectric energy which is transmitted across a State line. The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, but shall not have jurisdiction, except as specifically provided . . . over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce . . .

28. See *supra* note 27. Congress had concluded that the business of transmitting and selling electricity affected the public interest. See *supra* note 27. The F.P.C. could, therefore, regulate the transmission of electric energy under its power to regulate interstate commerce. The F.P.C. also regulated the sale of wholesale electricity.

29. S. BREYER & P. MACAVOY, *supra* note 22, at 2.

regulation in this area. The F.P.C. thus rarely exercised its authority to regulate transmission of electricity.<sup>30</sup> After the New York City blackout of 1965, however, the F.P.C. began to review the delivery of electric power. The agency concluded that its authority under the Federal Power Act was limited to the physical interconnection of transmission lines, not the movement of electricity over those lines.<sup>31</sup>

During the early to mid-1970s, a number of factors threatened the financial viability of many utilities.<sup>32</sup> The 1973 Arab oil embargo, as well as the collapse of public utilities' investments in nuclear generators, resulted in a consumer rate shock. Rates rose from two cents per kilowatt hour in 1970 to three cents in 1973.<sup>33</sup> As electricity became increasingly more expensive, demand sharply decreased.<sup>34</sup> State commissions, previously the vanguard of the utilities, began to align with the consumer. Simultaneously, large industrial customers began generating their own electricity.<sup>35</sup> Consumers, large and small, grew dissatisfied with the service of the utilities.

## II. THE STRUCTURE OF THE ELECTRIC INDUSTRY

The electric industry is divided into three stages: generation,<sup>36</sup> transmission<sup>37</sup> and distribution.<sup>38</sup> Before one can evaluate critically the legislative response to the problems identified above, one must be familiar

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30. See W. FOX, *supra* note 13 at 755.

31. Breyer & MacAvoy, *The Federal Power Commission and the Coordination Problem in the Electrical Power Industry*, 46 S. CAL. L. REV. 661, 698-99 (1973).

32. See, e.g., *In re Consumers Power Company*, 68 Pub. Util. Rep. 4th (PUR) 42 (grappling with the potential bankruptcy of Consumers Power); *Cuomo Backs Public Power for Long Island, Reform of State Public Service Commission*, 14 Energy Users Rep. (BNA) 34 (Jan. 16, 1986) (reporting that New York governor supports public takeover of financially troubled Long Island Lighting Co.). See generally Sponseller, *Utility Bankruptcy: A Negative Option?*, PUB. UTIL. FORT., Feb. 6, 1986, at 53 (discussing utility commission reactions to problems of near-bankrupt utilities); Sponseller, *Federal Securities Law and the Need to Disclose the Risk of Cancelling Nuclear Plant*, PUB. UTIL. FORT., Nov. 8, 1984, at 62 (identifying five utilities whose financial viability is in jeopardy); Worenklein & Gerstell, *Public Utility Bankruptcy: Lessons for Management and Creditors*, PUB. UTIL. FORT., Dec. 6, 1984, at 26 (describing several utilities as "teetering on the brink").

33. See *supra* note 2. See also *New York: Shoreham—Related Rate Request Filed*, PUB. UTIL. FORT., June 23, 1983, at 49 (reporting a request for a 56.5% rate increase over three years); *High Rate Requests Spread Out Costs of Plants*, New Orleans Times-Picayune, Sept. 11, 1983, § 1 at 20, col. 1 (reporting that New Orleans area's two utilities requested rate increases of 48% to 97%).

34. See W. FOX, *supra* note 13, at 755.

35. *Id.*

36. See *infra* notes 49-55 and accompanying text.

37. See *infra* notes 56-61 and accompanying text.

38. See *infra* notes 62-70 and accompanying text.

with all three industry functions, as well as the economic principles common to the electricity business.<sup>39</sup>

### A. Economics

At one time, electricity was an economy of scale industry.<sup>40</sup> When Congress first attempted to regulate the industry all three aspects of the industry were "natural monopolies."<sup>41</sup> This means that as production increased, the marginal cost (the cost to produce one more additional unit) decreased. Therefore, one firm could more easily spread its costs across a finite amount of sales than if two firms divided the market. In the early 1900s, state and local governments realized the natural monopolistic nature of the electricity business and thus that the most economical way to manufacture electricity was to allow one entity to manufacture power.<sup>42</sup> Governments reacted by granting monopolistic franchises of electricity generation and distribution, and justified them as being in the customer's best interest.<sup>43</sup> The finite number of franchises also curbed the widespread construction of generation plants. Because there were lower overall costs in the manufacture of electricity, the public utilities passed this savings to the consumer.<sup>44</sup>

In addition to the officially sanctioned monopolies, the capital intensive nature of the industry has also hindered new investment. To con-

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39. For a comprehensive and thorough discussion of how F.E.R.C. sets rates, see Small, *A FERC Electric Rate Primer*, 5 ENERGY L.J. 197 (1984).

40. See *infra* notes 40-47 and accompanying text.

Economies of scale tend to account for the downsloping of an average total cost curve. As a plant's site increases, many variables result in lowered average costs of production. The variables contributing the most to this economic phenomenon are:

a) Labor Specialization—If a plant is large enough, the management may divide workers into distinct job functions, thereby allowing each worker to specialize at one task.

b) Managerial Specialization—Just as a plant laborer is able to specialize, so will its management. A manager could supervise an extra ten or fifteen employees with no increase in administrative cost.

c) Efficient capital—In some industries (electricity included) the most complex and efficient manufacturing units are the most expensive. Additionally, maximizing the efficiency of the equipment requires a high level of production.

d) By-Products—A large manufacturing process will, of course, produce by-products. In the electricity industry, the best example is the steam produced by a co-generator. C. MCCONNELL, *ECONOMICS* 500-01 (5th ed. 1981).

41. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 29-34, 144. Cf. Pym & Sussmann, *Antitrust and Electric Utility Regulation*, 28 ANTITRUST BULL. 69, 71 (1983).

42. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 29-34

43. *Id.*

44. *Id.*

struct a generator with the capacity to serve an area large enough to earn any appreciable profit costs hundreds of millions of dollars.<sup>45</sup> Further, this capital expenditure is a "sunken cost."<sup>46</sup> If demand is insufficient to meet the supply of a generator, the investor cannot simply pick up the plant and move it to another location where the supply/demand dynamics will better accommodate a new generation facility. Moreover, transmission and facilities also involve extensive sunken costs.<sup>47</sup> In addition to the deterrent effect of these expenditures, there is also a spatial limit<sup>48</sup> to constructing electric lines; utilities cannot simply construct lines wherever they want.

### B. Generation of Power

Generation is the actual production of electricity.<sup>49</sup> A utility reaches the economy of scales at an output of 10,000 megawatts.<sup>50</sup> The total generating capacity of the entire United States is approximately 640,000,000 megawatts.<sup>51</sup> It appears, therefore, that if one uses the relevant market as the entire nation, electricity generation is not necessarily a natural monopoly.<sup>52</sup> In theory, the United States could easily accommodate 64,000 power plants. Even if, however, one measures the market only in regions, electricity still is not a natural monopoly, because a large region could support several generators.<sup>53</sup>

Electricity generation is no longer a natural monopoly.<sup>54</sup> If electricity

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45. See *Annual T&D Construction Survey*, ELECTRICAL WORLD 93 (Sept. 1988); *Annual Generation Construction Survey*, ELECTRICAL WORLD 45 (Jan. 1988).

46. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 65.

47. *Id.*

48. *Id.* at 63-65.

49. Investor-owned utilities attribute approximately 50% of service costs and 80% of operation and maintenance costs to generation. *Id.* at 45. The public utilities argue that electricity is expensive to manufacture because of the unpredictability of demand. *Id.* For example, the amount of electricity used during a hot summer day is not the same as on a cool spring night.

50. P. JASKOW & R. SCHMALENSEE, *supra* note 4, at 45.

51. *Id.* at 237 n.1.

52. See *supra* note 41-42 and accompanying text.

53. See J. ACTON & S. BESEN, *THE ECONOMICS OF BULK POWER EXCHANGES* 43 (1985).

54. Ironically, until the 1970s, electric rates continually declined because of enhanced technologies, economies of scale and expanding markets. See Joskow, *Inflation and Environmental Concern: Structural Change in the Process of Public Utility Price Regulation*, 17 J. L. & ECON. 291, 305-11 (1974). Faulty governmental regulation has played a major role in the decline of the electricity industry. See Pierce, *The Regulatory Treatment of Mistakes in Retrospect: Cancelled Plants and Excess Capacity*, 132 U. PA. L. REV. 497 (1984) (regulatory provision of investment decisions and rate led to decline of industry).

could be sold to wider service areas, then a larger market would exist for that power. If utilities could sell more energy, they could attain a lower marginal cost at lower output levels relative to the overall capacity of the generation plant.<sup>55</sup> This theory presupposes that a utility will increase its output, and has the means to transmit and distribute the manufactured electricity. Thus, a monopoly does not necessarily represent the least expensive way to produce electricity, provided, however, that utilities have access to transmission and distribution facilities.

### C. *Transmission*

Transmission refers to the movement of bulk power between utilities, or between the generation facility and the ultimate distribution point. Transmission of power between utilities is referred to as "wheeling."<sup>56</sup> Unlike generation, the economies of scale in transmission are large enough that it remains, and always will remain, a natural monopoly.<sup>57</sup> Accounting data suggests that transmission is the least important link in the system, representing only fifteen percent of total plant and less than two percent of total electricity operating and maintenance expenses.<sup>58</sup>

To evaluate properly the importance of this element of the industry, however, one must evaluate the function it serves, not the revenue it commands. Transmission is the link between manufacture and sale. Further, the manufacturer cannot store electricity. If a manufacturer cannot move its electricity from the generation plant to the consumer, there is no incentive to enter the electricity industry or increase generation capacity. Access to transmission lines, therefore, is imperative for the generation sector.

In addition to interconnection of generation plants and connection with distribution centers, transmission lines have another crucial function; they are the arteries for efficient power coordination and catalysts to further construction.<sup>59</sup> Utilities are aware of the substantial economies

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55. For example, consider a generator that attains its decreasing marginal cost at an output of 10,000 megawatts and has an overall output of 100,000 megawatts. One can say that the generator reaches decreasing marginal cost at 10% of its output capacity. If, however, the same generation plant could produce 200,000 megawatts, it would reach its decreasing marginal cost at a level of 5%.

56. The Supreme Court defined wheeling as the "transfer by direct transmission or displacement [of] electric power from one utility to another over the facilities of an intermediate utility." *Otter Tail Power Co. v. United States*, 410 U.S. 366, 368 (1973).

57. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4 at 60, 62, 65.

58. *Id.* at 62-63.

59. *Id.* at 63-77.

of scale associated with transmission and will consider the location of the distribution grids before investing millions into one particular area.<sup>60</sup> Also, substantial vertical and horizontal integration<sup>61</sup> of these assets occurs within the electricity business. When suggesting a potential scheme of deregulation, scholars and law makers must remain cognizant of this cooperation between power plants. In short, to be successful a deregulation plan should take advantage of the present coordination attempts of the utilities.

#### D. Distribution

Distribution is the low voltage movement of electricity to the ultimate consumer.<sup>62</sup> Like transmission services, distribution is a decreasing cost industry and thereby a natural monopoly.<sup>63</sup> Because the economies of scale are so dense, more than one distribution system for the same area would be impractical.

Transmission and distribution thus remain natural monopolies.<sup>64</sup> For a new manufacturer to compete, it would have to construct new distribution lines parallel to existing ones.<sup>65</sup> The consequences of this unneeded construction is to increase the cost to the ultimate consumer. If, however, independent power producers (I.P.P.'s) actually had access to existing transmission and distribution facilities, competition could exist on the generation level, thereby decreasing the cost to the consumer. Further, competition at this level would also reduce the need for regulation.<sup>66</sup> Because firms would vie for customers, there would be no need to regulate rates; the supply and demand forces of the market would perform the necessary rate maintenance.

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60. Fuller, *Cogeneration and Small Power Production: Florida's Approach to Decentralized Generation* 9 NOVA L.J. 25, 27-29 (1984).

61. Integration refers to the relationship between entities. To say that a firm is vertically integrated means that the same firm owns the generation, transmission and distribution facilities. To say that firms are horizontally integrated means that various firms in *one* of the three areas participate as one. Essentially, horizontal integration is coordination on a smaller level. P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 11-23.

62. *Id.* at 59.

63. *Id.* at 62, 64-65.

64. *Id.* at 62.

65. *Id.*

66. Parenthetically, virtually all transmission of electricity falls within the definition of "interstate commerce," and is therefore subject to exclusive F.E.R.C. regulation. Florida Power & Light Co., 29 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,140 (1984) (asserting exclusive federal jurisdiction over virtually all transmission service in Florida).

The problem, however, is that utilities have already constructed, paid for, and maintained existing lines. Understandably, they are unwilling to provide others access to the lines for fear of eroding their monopolistic position. The utilities argue that if they provide wheeling services, the I.P.P.'s could take advantage of the utilities' investment to the utilities' detriment.<sup>67</sup> The premise for this argument is that it does not cost the same amount to provide electrical service to all customers. For example, it costs less to provide service to a customer in a downtown area where there is an abundance of customers as opposed to providing power to the single customer in a rural area. Utilities average the cost among all their customers and charge all the same rate.<sup>68</sup>

The utilities maintain that an I.P.P. would use the utility's lines to wheel power to a customer who would normally purchase electricity from the wheeling utility which owns the line.<sup>69</sup> Because the I.P.P. is charging a cheaper rate *and* using the utility's existing wheeling lines, the I.P.P. is benefiting twice. Not only is it avoiding constructing its own lines, it is skimming the cheapest customers because it is not required to serve the more expensive customers.<sup>70</sup> This decreases its average cost, and the I.P.P. can therefore supply electricity at a significantly lower cost.

### *E. Pooling/Coordination*

As the electrical industry grew, power companies realized that if they coordinated their generation and transmission systems across larger areas (as opposed to one distribution area), they could produce and deliver power in a more cost effective and efficient manner.<sup>71</sup> This coordination

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67. 2 A. KAHN, *THE ELEMENTS OF REGULATION: PRINCIPLES AND INSTITUTIONS* 220-46 (1971).

68. *Id.*

69. This is a similar concern that arose in telecommunications long distance regulation. See, e.g., Copeland & Severn, *Price Theory and Telecommunications Regulation: A Dissenting View* 3 *YALE J. ON REG.* 53 (1985); Kahn & Shaw, *Current Issues in Telecommunications Regulation: Pricing*, 4 *YALE J. ON REG.* 191 (1987).

70. A. KAHN, *supra* note 67 at 220-46.

71. S. BREYER & P. MACAVOY, *supra* note 22, at 91, 94-107. By coordination, utilities save directly in six cost areas: operating costs, reserve costs, costs for meeting peak demands, generating costs, transmission reliability costs, and environmental costs. Breyer and MacAvoy have described the cost savings of pooling. What follows is a summary of their description.

Utilities minimize operating costs when they adopt a central dispatch system. A central dispatch system is a program aimed at using the cheapest electricity manufactured among a number of utilities. The utilities calculate the marginal cost of producing energy at certain output levels. The utilities then supply the least expensive electricity; when that generator is running at capacity, the

manifested itself in the form of "power pooling."<sup>72</sup> Pooling refers to coordination on a smaller scale. If a firm produces more than 10,000 megawatts, it can economically and efficiently generate and transmit energy.<sup>73</sup> Firms manufacturing less than 10,000 megawatts, however, enter into agreements to capitalize on the larger economies of scale, integrating vertically as well as horizontally.

Coordination promotes competition and rate reduction because each member of the pool has a number of sources from which to draw.<sup>74</sup> That is, if one member of the pool suffers a mechanical breakdown at the generation level, another member of the pool can supply the needed electric-

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next least expensive generator is "fired up" and it operates until it is at capacity. The process is repeated until all generators are running at full capacity.

Reserve costs refers to the amount it costs a utility to keep extra capacity in times when demand exceeds supply or when generators need repair and maintenance. If utilities coordinated their operations, they could stagger their maintenance schedules and, therefore, all the utilities in the system would need less reserve capacity.

Costs for meeting peak demands are those costs associated with providing electricity when demand is highest, e.g., on a hot summer day or a bitter cold night. If utilities in two time zones have peak demands at different times, they may share the equipment needed to meet the varying times of demand.

Coordination can also decrease generating costs. Although larger plants (400,000 kilowatts) manufacture electricity most cheaply, a large generator also requires a large back-up unit. Further, larger generators break down more frequently than smaller ones. Many intercoordinated smaller generation units can meet the same demand as a large one and therefore meet a larger demand.

Transmission reliability costs refer to those costs associated with supplying electricity in those few seconds between the breakdown of a generator and the start-up of the reserve generators. Because all generators will not breakdown at the same instant, if they are interconnected, they can share the same source of this power.

Intercoordination among utilities can also mitigate the environmental impact of the energy business. The manufacture of energy affects the environment: plants burning fossil fuels pollute the air, nuclear plants near adjacent water ways, dams and hydro-electric plants irritate the environment. With coordination, firms will produce less total energy, and the total impact will be less. *Id.*

72. *Id.* There are two types of pools, tight pools and loose pools. As the names suggest, tight pools compel strict coordination requirements upon the members, including capacity requirements and central dispatch of electricity. Approximately 30% of all pools are tight.

Loose pools, however, impose the same restrictions on coordination in planning and operation but they are more lenient with respect to central dispatch. The essential distinction between the two is that a tight pool operates more like a single entity than loose pools.

Power pooling arrangements reduce costs compared to the cost of electricity absent coordination. The evidence, however, is inconclusive whether the savings from further coordination would outweigh the costs. *Id.* at 97-101, 109-110.

73. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 65, 66-77.

74. Smaller pools have as little as five members while the larger ones have as many as thirty members. One coordination group in the Midwest and the South has eight major electricity producers and twenty-six smaller producers with a capacity of less than 1000 megawatts. S. BREYER & P. MACOVY, *supra* note 22, at 103, table 4-2.

ity, curing the temporary deficit. This cooperation breeds competition because buyers and sellers realize that there are more than one generator and transmitter in the market. Buyers will search for the cheapest energy and sellers will try to produce the cheapest form of energy. Further, competition is healthy for the electricity business because firms will strive to produce and distribute power in the most cost effective manner. Utilities will thus develop new technologies to serve a broader client base. Technology and competition feed one another: the more competition, the more advanced the technology, and the more advanced the technology, the more electricity is sold, which in turn, breeds more competition.

The ultimate beneficiary of this new competition is the end consumer. In the early years of electricity, utilities were aware that the F.P.C. set rates at the utility's cost of production plus a reasonable rate of return. The utilities had no incentive to produce energy more efficiently because they knew they would always recoup their costs due to the rate structure. This result prompted Congress to pass legislation granting F.E.R.C. the power to regulate the transmission of power.<sup>75</sup>

### III. P.U.R.P.A.

In P.U.R.P.A., sections 202<sup>76</sup> and 203,<sup>77</sup> Congress gave the F.E.R.C. jurisdiction over energy transmission. One of the main thrusts of P.U.R.P.A. is to encourage the development of cogeneration<sup>78</sup> and I.P.P.'s, via state implementation of broad guidelines.<sup>79</sup> While the state

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75. See *supra* notes 5-9 and accompanying text.

76. 16 U.S.C. 824i (1982).

77. 16 U.S.C. § 824j (1982), states:

(a) Unjust or preferential rates, etc. Whenever the Commission, after a hearing had upon its own motion or upon complaint, shall find that any rate, charge, or classification, demanded, observed, charged, or collected by any public utility for any transmission or sale subject to the jurisdiction of the Commission, or that any rule, regulation, practice, or contract affecting such rate, charge, or classification is unjust, unreasonable, unduly discriminatory or preferential, the Commission shall determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order.

*Id.*

78. 16 U.S.C. § 824a-3 (1982) states in pertinent part: "(a) [T]he Commission shall prescribe . . . such rules as it determines necessary to encourage cogeneration. . . ."

79. Section 210 of P.U.R.P.A. delegates to state public utilities commissions the responsibility of executing the F.E.R.C. regulations. The Public Utility Commissions' primary responsibility is to set the rates that the utilities may charge. The statute states in pertinent part:

The rules prescribed under subsection (a) of this section shall insure that, in requiring any electric utility to offer to purchase electric energy from any qualifying cogeneration facility

public utility commissions have pre-eminent regulatory discretion, P.U.R.P.A. directs public utility behavior in three ways.

First, F.E.R.C. may require a utility to interconnect I.P.P.'s with the utility's own distribution and transmission grids.<sup>80</sup> The I.P.P.'s must be "qualifying facilities"<sup>81</sup> and the F.E.R.C. may require the utility to wheel only to the extent that it will serve an existing contract. Second, P.U.R.P.A. bars a public utility from setting discriminatory or burdensome rates for backup power.<sup>82</sup> This is to prevent utilities from squeez-

or qualifying cogeneration facility or qualifying small power production facility, the rates for such purchase—

- (1) shall be just and reasonable to the electric consumers of the electric utility and in the public interest, and
- (2) shall not discriminate against qualifying cogenerators or qualifying small power producers. No such rule prescribed under subsection (a) of this section shall provide for a rate which exceeds the incremental cost to the electric utility of alternate electric energy.

16 U.S.C. § 824a-3(b) (1985). *See Consolidated Edison Co. of New York v. Public Service Comm'n*, 98 A.D.2d 337, 379, 471 N.Y.S.2d 684, 686 (1983); 16 U.S.C. § 824a-3(a)(1982). *See also American Paper Inst., Inc. v. American Elec. Power Serv. Corp.*, 461 U.S. 402, 404-06 (1983).

80. 18 C.F.R. § 292.303(e) (1988).

(c) *Obligation to interconnect.* (1) Subject to paragraph (c)(2) of this section, any electric utility shall make such interconnections with any qualifying facility as may be necessary to accomplish purchases or sales under this subpart. The obligation to pay for any interconnection costs shall be determined in accordance with § 292.306.

(2) No electric utility is required to interconnect with any qualifying facility if, solely by reason of purchase or sales over the interconnection, the electric utility would become subject to regulation as a public utility under Part II of the Federal Power Act.

*Id.*

81. P.U.R.P.A. retained the original Federal Power Act definition of qualifying utility: "(A) small power production facility: means a facility which (i) produces electric energy solely by the use, as a primary energy source, of biomass, waste, renewable resources, geothermal resources, or any combination thereof;" 16 U.S.C. § 796 (17)(A)(i) (1982).

82. 18 C.F.R. § 292.305 (1988). § 292.305 states:

Rates for sales. (a) General rules. (1) Rates for sales:

- (i) Shall be just and reasonable and in the public interest; and
  - (ii) Shall not discriminate against any qualifying facility in comparison to rates for sales to other customers served by the electric utility. . . .
- (b) Additional Services to be Provided to qualifying Facilities. (1) Upon request of a qualifying facility, each electric utility shall provide:
- (i) Supplementary power;
  - (ii) Back-up power;
  - (iii) Maintenance power; and
  - (iv) Interruptible power.

Congress' rationale is that generators must have sufficient backup power in case the generator suffers a mechanical breakdown. Fuller, *Cogeneration, & Small Power Production: Florida's Approach to Decentralized Generation*, 9 NOVA L. R. 25, 30 (1984). If the public utilities supply back up power at an exorbitant price, they deny affordable back up power to I.P.P.'s and prevent them from entering the market. Thus, by charging astronomical rates for back up power, the public utility can keep the I.P.P.'s out of the market. The utilities therefore retain their monopoly.

ing out I.P.P.'s by overcharging them for necessary back up power. Third, P.U.R.P.A. requires the public utility to purchase power from a qualifying facility at the utility's "avoided cost,"<sup>83</sup> in other words, the amount of money the utility would have spent to generate power, but for its purchase from the I.P.P.<sup>84</sup>

Although P.U.R.P.A. attempts to encourage the independent generation of electricity, it does not give the F.E.R.C. the critical power to insure a competitive environment. The F.E.R.C. may order a public utility to wheel energy in only very limited circumstances, giving I.P.P.'s no real means to deliver their electricity. Until I.P.P.'s have equal access to transmission and distribution, they cannot effectively compete. The economies of scale associated with transmission are too immense to allow an I.P.P. to enter the market effectively. The Supreme Court in *Otter Tail Power Co. v. United States*<sup>85</sup> perpetuated this situation by declaring the F.E.R.C. powerless to order wheeling.<sup>86</sup>

The *Otter Tail* case involved a Sherman Act suit brought by the federal government against the Otter Tail Power Company (Otter Tail), a large public utility.<sup>87</sup> Otter Tail possessed the only facilities to transport electricity from a competing seller to Otter Tail's own customers.<sup>88</sup> The government argued that Otter Tail violated the antitrust laws by refusing to transport power.<sup>89</sup> Otter Tail contended that the Federal Power Act displaced the antitrust laws because it gave the F.P.C. the power to order the defendant to transmit power, but the F.P.C. simply had not yet exercised this right.<sup>90</sup> The Court disagreed. It held that the F.P.C. did not have power to order wheeling,<sup>91</sup> and therefore, was not displaced by the Federal Power Act and the antitrust laws.

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83. 18 C.F.R. § 292.101(b)(6) (1988) provides: "'Avoided costs' means the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source."

84. P.U.R.P.A. § 210 states in pertinent part: "No such rule prescribed under subsection (a) of this section shall provide for a rate which exceed the incremental cost to the electric utility of alternative electric energy." 16 U.S.C. § 824a-3(b)(1982). Note though that the different state utility commissions interpret this concept inconsistently. See, e.g., *Wooster, Cogeneration: Revival Through Legislation?*, 87 DICK. L. REV. 705 (1983).

85. 410 U.S. 366 (1973).

86. *Id.* at 375.

87. *Id.* at 368.

88. *Id.*

89. *Id.*

90. *Id.* at 372-75.

91. *Id.*

Some litigants have argued that because F.E.R.C. can control rates for transmission services, F.E.R.C. also has the authority under Federal Power Act section 202(a) to require the utility to wheel for *any* generator.<sup>92</sup> The Court of Appeals for the District of Columbia flatly rejected this assertion in *Richmond Power & Light v. Federal Energy Regulatory Commission*. In *Richmond Power*, the court held that wheeling is voluntary and the commission has no power to require wheeling indirectly through its rate regulation powers.<sup>93</sup> The Fifth Circuit also rejected a variation of this argument in *Florida Power & Light v. FERC*.<sup>94</sup> *Florida Power* involved the issue of whether F.E.R.C. could compel Florida Power to include a stated rate policy in all future transmission agreements under Federal Power Act Section 205.<sup>95</sup> F.E.R.C. argued that its ability to do so transformed Florida Power into a common carrier,<sup>96</sup> and thus, F.E.R.C. could order it to wheel on behalf of an I.P.P. The court rejected this argument.<sup>97</sup> Both cases held that while a *court* may order a utility to wheel under the antitrust laws, F.E.R.C. (under sections 202 and 205) may not.<sup>98</sup>

#### A. F.E.R.C.'s Power to Order Wheeling

Although Federal Power Act sections 202 and 205 do not authorize F.E.R.C. to issue a wheeling order, P.U.R.P.A. sections 202, 203, and 204 do.<sup>99</sup> The difficulty is that F.E.R.C. may only do so after an extensive finding of fact. To order wheeling, F.E.R.C. must first find that the proposed order is "in the public interest,"<sup>100</sup> and "it is not likely to result in a reasonably ascertainable and uncompensated economic loss for any electric utility" (or I.P.P.).<sup>101</sup> In addition, the wheeling order may not work any "undue burden on a utility" or (I.P.P.);<sup>102</sup> and it must "con-

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92. 574 F.2d 610 (D.C. Cir. 1978). Section 202(a) is codified at 16 U.S.C. 824a(a).

93. *Id.* at 619-20. The court also held that for antitrust purposes a refusal to wheel is not per se discriminatory. *Id.* at 623-24.

94. 660 F.2d 668 (5th Cir. 1981), *cert. denied*, 459 U.S. 1156 (1983).

95. *Id.* at 676-77. Federal Power Act § 205(c) is codified at 16 U.S.C. 824d(c).

96. *Id.* at 677-78.

97. 660 F.2d at 677-78.

98. *See* 660 F.2d at 677-70; 574 F.2d at 619-22. Nor did F.E.R.C.'s predecessor, the Federal Power Commission have power to order wheeling. *See City of Paris v. Kentucky Util. Co.*, 41 Fed. Energy Reg. Comm'n Rep. (CCH) 45 (1969).

99. 16 U.S.C. §§ 824i; 824j; 824k.

100. *Id.* § 824j(a)(1).

101. *Id.* § 824k(a)(1).

102. *Id.* § 824k(a)(2).

serve a significant amount of energy,"<sup>103</sup> or "significantly promote the efficient use of facilities and resources,"<sup>104</sup> or "improve the reliability of any electric utility system to which the order applies."<sup>105</sup> The order also must "not unreasonably impair the ability of any electric utility . . . to render adequate service to its customers,"<sup>106</sup> and it must "preserve existing competitive relationships."<sup>107</sup> Finally, the order must not require replacing electric energy currently provided pursuant to contract or rate standards<sup>108</sup> and may not be "inconsistent with any state law which governs the retail market areas of electric utilities."<sup>109</sup> F.E.R.C. must also find that the requesting applicant formally notified the utility of its refusal.<sup>110</sup> This battery of requirements is a two-edged sword. The utilities are hesitant to refuse wheeling requests because of the treble damages that the statute allows. On the other hand, because F.E.R.C. must make extensive factual findings, I.P.P.'s are hesitant to seek a wheeling order because the request is rarely granted. There is thus no incentive for I.P.P.'s to incur the necessary litigation costs to compel wheeling. Even though F.E.R.C. has a limited degree of power to order wheeling, the power goes largely unused and unchallenged.<sup>111</sup>

Within the past year, however, F.E.R.C. has relied on its power to approve mergers between utility companies to require wheeling. The Federal Power Act authorizes F.E.R.C. to approve utility mergers as long as the merger serves the public interest. Section 203 of the Act further provides that F.E.R.C. may make supplemental orders "for good cause . . . as it may find necessary and appropriate."<sup>112</sup> F.E.R.C. used section 203 to require wheeling access as a condition of approval of a merger between PacifiCorp and Utah Power & Light Company.<sup>113</sup> Although F.E.R.C. generally may not require by condition a producer to

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103. *Id.* § 824j(a)(2)(A).

104. *Id.* § 824j(a)(2)(B).

105. *Id.* § 824j(a)(2)(C).

106. *Id.* § 824k(a)(3).

107. *Id.* § 824j(c)(1).

108. *Id.* § 824j(c)(2)(A),(B).

109. *Id.* § 824j(c)(3).

110. *Id.* § 824j(a).

111. *See, e.g.,* Southeastern Power Admin. v. Kentucky Util. Co., 25 Fed. Energy Reg. Comm'n. Rep. (CCH) ¶ 61,204 (1983).

112. Originally, the "necessary and appropriate" clause was not intended to cover wheeling. Later the clause was amended to prevent abuses in the industry. Roberts, *New Slant on the Law Imposed on Utility Merger*, L.A. Daily Journal, Nov. 1, 1988 at 7, col. 5.

113. *Id.*

do something, a challenge to this authority could prove futile. For example, if the utility did successfully challenge a wheeling order under this scheme, F.E.R.C. simply could refuse to authorize the merger.

### B. Antitrust Issues

If an I.P.P. could show anti-competitive or monopolistic practices resulting from a utility's refusal to wheel, section 2 of the Sherman Act could provide relief.<sup>114</sup> The Supreme Court addressed this issue in *Otter Tail Power Co. v. United States*.<sup>115</sup> The Court held that even if F.E.R.C. could not order a utility to wheel under the Federal Power Act, a court could.<sup>116</sup>

Unfortunately, many problems arise in using a Sherman Antitrust cause of action in a regulated industry. Although the case law on this subject varies from industry to industry,<sup>117</sup> the law has long provided certain natural monopolies with exempt status from the antitrust laws.<sup>118</sup> In addition, an I.P.P. has considerable logistical obstacles in bringing this type of litigation. Given the costs associated with bringing an antitrust action combined with the time and the uncertainty of success, the risk is so great that it dissuades potential plaintiffs.<sup>119</sup>

One promising but still uncertain<sup>120</sup> theory that an I.P.P. could use to convince a court to order wheeling is the essential facility doctrine.<sup>121</sup>

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114. 15 U.S.C. § 2 (1982). The Sherman Antitrust Act levies a fine or imprisonment on those who "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States." *Id.*

115. 410 U.S. 366.

116. See *supra* notes 77-83 and accompanying text.

117. L. SULLIVAN, ANTITRUST, 743-45 (1977).

118. See, e.g., *Keogh v. Chicago N. & W. Ry.*, 260 U.S. 156 (1922) (holding that railroad rate regulatory scheme precluded private party's antitrust action alleging conspiracy to fix rates); *United States v. Pan American World Airway Inc.*, 371 U.S. 296, 304-305 (1962) (holding that § 41 of the 1938 Civil Aeronautics Act gave the Board broad jurisdiction over carriers, as far as most facets of federal control (including antitrust action) are concerned). See also L. SULLIVAN, *supra* note 117 at 744.

119. See *Byars v. Bluff City News Co.*, 609 F.2d 843, 846 (6th Cir. 1979).

120. The essential facilities doctrine has yet to be applied to regulated industries. It was first used in 1911, in *United States v. Terminal R.R. Ass'n*, 224 U.S. 383 (1911), in a dispute involving a railroad bridge. Subsequent to the *Terminal Railroad* case, courts applied the doctrine to (among other things) selling time, *American Fed'n of Tobacco Growers v. Neal*, 183 F.2d 869 (4th Cir. 1950); and to warehouse space, *GAMCO, Inc. v. Providence Fruit & Produce Bldg.*, 194 F.2d 484 (1st Cir.), *cert. denied*, 344 U.S. 817 (1952).

121. See generally Ratner, *Should There be an Essential Facilities Doctrine*, 21 U.C. DAVIS L. REV. 327, 327-82 (1988); Werden, *The Law & Economics of the Essential Facility Doctrine*, 32 ST. LOUIS U.L.J. 433, 433-80 (1987).

This doctrine contemplates a company or group of companies that control a requisite element (essential facility) of a certain industry. If the company refuses to grant access to the facility, a court would deem the refusal anti-competitive and monopolistic behavior and therefore a violation of section 2 of the Sherman Act.<sup>122</sup>

When courts use the essential facilities doctrine, the threshold question is always whether the facility is "essential."<sup>123</sup> Generally, the standard is whether a potential market enterer could feasibly duplicate the facility and whether the refusal of access precludes entry into the market.<sup>124</sup> Even if, however, a court found that a public utility controlled an essential facility and therefore possessed monopoly power, the court must also find an *abuse* of monopoly power and an antitrust injury.<sup>125</sup>

At least two circuits<sup>126</sup> have abandoned the traditional market share analysis<sup>127</sup> in unregulated industries antitrust litigation and have adopted the essential facilities doctrine.<sup>128</sup> Moreover, Justice Stewart's dissent in *Otter Tail* urged the majority to employ the essential facility doctrine.

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122. See *MCI Communications Corp. v. American Tel. and Tel. Co.*, 708 F.2d 1081 (7th Cir.), *cert. denied*, 464 U.S. 891 (1983); *Byars v. Bluff City News Co.*, 609 F.2d 843 (6th Cir. 1979); *Hecht v. Pro-Football, Inc.*, 570 F.2d 982 (D.C. Cir. 1977), *cert. denied*, 436 U.S. 956 (1978).

123. *Hecht v. Pro-Football, Inc.*, 570 F.2d 982, 992 (D.C. Cir. 1977), *cert. denied*, 436 U.S. 956 (1978) (if a corporation possesses an essential facility that cannot be reproduced, the utility has the power to restrict, indeed prohibit, any entry to the market).

124. *Id.*

125. See L. SULLIVAN, *supra* note 117, at 743-46.

126. The Fifth and Seventh Circuits have expressly rejected the market share analysis with respect to regulated industries. See *infra* note 129.

127. In the traditional market share analysis, a court focuses on the portion of the market that an alleged monopolist controls. See E. SULLIVAN & H. HOVENKAMP, *ANTITRUST LAW POLICY AND PROCEDURE*, 407 (1986).

128. Twice in 1980 the Fifth Circuit used the essential facility doctrine. In *Almeda Mall, Inc. v. Houston Lighting & Power Co.*, 615 F.2d 343 (5th Cir.), *cert. denied*, 449 U.S. 870 (1980), shopping mall developers sued the local utility, alleging that the utility's refusal to sell electricity through a single meter for resale to mall tenants violated antitrust laws. Although the court ruled for the utility, it stated that: "monopolization cases involving such regulated industries are special in nature and require close scrutiny [because] regulation is considered an adequate replacement for the lack of competition. [Further,] controlling a predominant share of the relevant market *cannot infer the traditional monopoly power associated with an entity outside the regulated field.*" (emphasis added). *Id.* at 354.

In *Mid-Texas Communications Systems Inc. v. American Tel. & Tel. Co.*, 615 F.2d 1372 (5th Cir.), *cert. denied sub nom. Woodlands Telecommunications Corp. v. Southwestern Bell Tele. Corp.*, 449 U.S. 912 (1980), an independent telephone company sued AT&T, alleging that AT&T's refusal to provide toll interconnections violated the antitrust laws. The court held that the trial court's refusal to instruct the jury to consider regulatory dynamics was reversible error. *Id.* at 1387-90.

In *MCI Communications Corp. v. American Tel. & Tel. Co.*, 708 F.2d 1081 (7th Cir.), *cert. denied*, 464 U.S. 891 (1983), MCI sued AT&T on four counts all under the Sherman Antitrust Act.

Justice Stewart argued that a mechanical application of section 2 of the Sherman Antitrust Act does not lend itself to the difficulties of the regulated industries. The *Otter Tail* court, however, refused to apply such an analysis.

Thus, because of the high degree of expense and length of the litigation, as well as the uncertainty of success of the essential facility doctrine, I.P.P.'s are generally reluctant to bring a cause of action based on the Sherman Act.<sup>129</sup>

There is a colorable argument that courts should not even involve themselves with the decision of ordering a utility to wheel. Congress delegated the responsibility of regulating electricity to the F.E.R.C.. Because F.E.R.C. is intimately involved with the electric industry on a day-to-day basis, it is more familiar with the esoteric peculiarities of that industry.<sup>130</sup> Judges, on the other hand, are essentially laymen with respect to any given industry, and their knowledge may be limited. Simply stated, judges are sometimes not equipped with the crucial knowledge necessary to evaluate a certain issue or problem. While a judge may base her decision in the hyper-technical industry on sound legal reasoning, she may very well be amiss in the practical realities of the abstruse technological and economic issues necessary to arrive at a fair and equitable result.

#### IV. PROPOSAL/POSSIBLE REFORM

There are many proposals for deregulating the energy industry<sup>131</sup> but

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The Seventh Circuit held "such a heavy reliance on market share statistics is likely to be an inaccurate or misleading indicator of monopoly power in a regulatory setting." *Id.* at 1106-07.

See also Watson & Brunner, *Monopolization by Regulated "Monopolies": The Search for Substantive Standards*, 22 ANTITRUST BULL. 599 (1977).

129. See Norton and Early, *Limitations on the Obligation to Provide Access to Electric Transmission and Distribution Lines*, 5 ENERGY L.J. 47, 63 (1984).

130. This argument falls under the administrative law concept of primary jurisdiction, i.e. whether an agency has jurisdiction over a dispute before a court should properly hear it. Generally, if a court has determined that an issue or a dispute is actually within the authority of an administrative agency, it will defer any decision until the agency has had the opportunity to rule on the issue. See R. PIERCE, S. SHAPIRO, & P. VERKUIL, *ADMINISTRATIVE LAW AND PROCESS* §§ 5.8, 5.8.3 (1985). Because F.E.R.C. *should have* the power to order wheeling, an antitrust case based on a refusal to wheel should be deferred pending the agency's determination.

131. See, e.g., S. BREYER & P. MACAVOY, *supra* note 22, at 89-121 (suggesting that government regulates many mergers so that the electric industry is controlled by 10-15 large firms); EDISON ELEC. INST. *ALTERNATIVE MODELS OF ELECTRIC POWER DEREGULATION* (1982) (reviewing studies of deregulation and competition in the electric utility industry); EDISON ELEC. INST., *DEREGULATION OF ELECTRIC UTILITIES: A SURVEY OF MAJOR CONCEPTS AND ISSUES* (1981) (summary of

they generally fall into one of three categories: divestiture, deregulation, or a mixture of the two. This section of the Note will evaluate three such recommendations.

### A. Complete Deregulation

Complete deregulation would not improve the I.P.P.'s present predicament for several reasons. Because generators reach their decreasing cost of production at a relatively low output level<sup>132</sup> one region could feasibly support a competitive environment of more than one generator. Thus, the problem does not lie with the generation sector of the industry. With respect to transmission and distribution facilities, however, the economies of scale are great enough to preclude any realistic entry in the market.<sup>133</sup> Because deregulation would permit utilities to restrict or prohibit access to the existing facilities, I.P.P.'s would still have difficulties in selling their electricity.<sup>134</sup>

### B. Vertical Divestiture

The above analysis does not address the question of divesting the electric industry. This proposal envisions the creation of three separate

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major proposals for deregulating the electric utility industry); A. KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS* 250 (1970) (arguing that the "ideal would be to reduce the scope of regulation insofar as possible, to applying the LRMC test of remunerativeness, as a floor, and protecting from exploitation, those many customers who, inevitably, will continue to lack access to sufficient competitive alternative."); WEISS, *ANTITRUST IN THE ELECTRIC POWER INDUSTRY, IN PROMOTING COMPETITION IN REGULATED MARKETS* 135 (A. Phillips ed. 1975) (arguing that deregulation may be best served in copious interpretation of antitrust law); Cohen, *Efficiency and Competition in the Electric-Power Industry*, 88 *YALE L.J.* 1511, 1538-1546 (1979) (arguing that a regional dispatch system would best serve electricity supply demand); Meeks, *Concentration in the Electric Power Industry: The Impact of Antitrust Policy*, 72 *COLUM. L. REV.* 64, 129-31 (1972) (suggesting that the government forbear the traditional question of regulate vs. non-regulate and concentrate instead on using antitrust legislation to best effect far and equal distribution of power); Miller, *A Needed Reform in the Organization and Regulation of the Interstate Electric Power Industry*, 38 *FORDHAM L. REV.* 635 (1970) (arguing for concentration responsibility for planning, constructing, and operation of generation and transmission facilities in interstate and foreign commerce in investor-owned regional public utility corporations); Olds, *The Economic Planning Function Under Public Regulation*, 48 *AM. ECON. REV.* 553, 561 (1958) (arguing that economic planning under regulation will separate the functions of wholesale power supply from the function of distribution of electricity thus giving full effect to mass-production and mass-sales principles which have proved successful in other American businesses); Berry, *The Case for Competition in the Electric Utility Industry*, *PUB. UTIL. FORT.*, Sept. 16, 1982, at 13.

132. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 154-55.

133. *Id.* at 65-66, 154-55.

134. *Id.* at 195.

industries: generation,<sup>135</sup> transmission,<sup>136</sup> and distribution.<sup>137</sup> Theoretically, Congress could completely deregulate the generation business. The transmission and distribution industries could either be regulated, state purchased, or transferred into common carriers.<sup>138</sup> Given the economic and technological characteristics unique to each industry, this proposal seems appealing. Under this proposal, each industry would warrant distinct and separate regulatory schemes. Further, one company need not control all three industries to maximize profits.<sup>139</sup> Under further scrutiny, however, this proposal's inefficiencies surface.<sup>140</sup> An understanding of the economics involved is essential to a discussion of the problems.

Essentially, economists divide transactions into two types, discrete and long term relational.<sup>141</sup> Discrete transactions refer to a long term contractual relationship where the parties can anticipate all emergency costs. Contracts, then, are a perfectly logical method to incorporate a discrete transaction. This is not true, however, for long term relational transactions because they involve uncertainty with respect to the forecast of future costs.<sup>142</sup> Long term relational transactions have three specific characterizations: 1) they involve sunken costs 2) they have repeating transactions between parties and 3) the future is uncertain with respect to performance of the contract.<sup>143</sup> The costs associated with the contract formation are so high as to render the transaction unprofitable.<sup>144</sup>

If the industry were vertically divested, transactions between generators and transmitters would assume the characteristics of relational transactions:<sup>145</sup> sunken costs, repeating transactions, and future uncer-

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135. See *supra* notes 49-55 and accompanying text.

136. See *supra* notes 56-61 and accompanying text.

137. See *supra* notes 62-70 and accompanying text.

138. See S. BREYER & P. MACAVOY, *supra* note 22, at 119-21. See also *Otter Tail Power Co. v. United States*, 410 U.S. 366, 374 (1972) (The Court reiterated congressional intent to delete a common carrier provision making it the duty of every public utility to transmit energy per reasonable request.); H.R. 5423, 74th Cong., 1st Sess., § 1725, and S. Rep. No. 621, 74th Cong., 1st Sess. (1983).

139. *Id.*

140. P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 4, 26-29, 63, 109-38, 204-05, 208.

141. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J.L. & ECON. 233, 241-42 (1979).

142. *Id.*

143. *Id.* at 246-47.

144. *Id.* at 245-46.

145. See P. JOSKOW & R. SCHMALENSEE, *supra* note 4, at 26-29, 112-13.

tainty with respect to performance of the contract.<sup>146</sup> Due to the uncertainty involved, the contracting process between those two utilities would be cumbersome, expensive and inefficient.

### C. *Horizontal Divestiture of Generation*

One scholar argues that horizontal divestiture of generation facilities, coupled with appropriate regulatory measures, would result in a perfect equilibrium of supply and demand.<sup>147</sup> This proposal neglects the substantial savings exhibited by the increased coordination in the system.<sup>148</sup> If Congress prevented generation facilities from cooperating to maximize resources and efficiency while minimizing costs, and allowed every utility to work solely in its own interests, there might be more competition, but probably at the ratepayers' expense.<sup>149</sup>

## V. PROPOSAL

Given the previous analysis of the present state of affairs as well as some of the tendered solutions, the most efficient and realistic method to increase competition, while maintaining a fair rate schedule, is to amend P.U.R.P.A.. To reach these goals, Congress must amend P.U.R.P.A. in three areas.

The first amendment would give the F.E.R.C. more power to compel a utility to wheel. Although rare circumstances allow F.E.R.C. to order wheeling, the agency must wait for a private party (the bulk power buyer) to bring a cause of action. The uncertainty of attaining an order, the legal costs involved, and the burden of proof the I.P.P. must shoulder, leave hardly any incentive for an I.P.P. or a municipal corporation to attempt to obtain wheeling order. Instead of a F.E.R.C. wheeling order being an exception to the rule, the general rule ought to give F.E.R.C. the power to mandate wheeling absent a showing of good cause to the contrary, for example, a potentially overloaded system.

One author suggests that Congress ought to repeal the section requiring F.E.R.C. to retain competition.<sup>150</sup> While this proposal seems attractive at first blush, it is too broad. Congress would need only to modify

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146. See *supra* note 123 and accompanying text.

147. See WEISS, *supra* note 131, at 136.

148. See *supra* Part II E.

149. *Id.*

150. See Note, *Problems of Price and Transportation: Two Proposals to Encourage Competition from Alternative Energy Sources*, 10 HARV. ENV. L. REV. 345 (1986).

the section, not repeal it. The statute states the F.E.R.C. should "preserve competition." If the statute said "encourage," not "preserve," then F.E.R.C. would arguably have more power to oblige a utility to wheel; such an order would certainly "encourage competition."

The F.E.R.C. also should have the power legally to do what it attempted in the *Florida Power* case. Congress should amend the Federal Power Act or P.U.R.P.A. to explicitly allow the F.E.R.C. to structure a rate schedule for wheeling services. Potential I.P.P.'s considering entrance into the market would then have the necessary information to forecast costs and, therefore, make a more informed decision whether or not to construct a generation plant.

It would also seem equitable to allow the utility to charge the same amount for wheeling services that the I.P.P. charges for electricity, in other words, marginal cost. The I.P.P. may only charge the avoided costs or the amount the buying utility saved by not producing one more unit of energy, or the "marginal savings." The logical scheme would require the utility to charge only their marginal cost of wheeling the power.

The final amendment of P.U.R.P.A. would require the wheeling utility to wheel for any I.P.P. as long as providing such service would not have an adverse impact on the transmission system. P.U.R.P.A. ought to give F.E.R.C. the power to levy heavy fines on any utility wheeling discriminatorily. Of course, the utility ought to have the chance to rebut the charge of discrimination. The amendment would, however, set a strict time limit on the utility's rebuttal. Absent such time limits, the utility could stall, preventing the I.P.P. from seeking an order. The potential lag time between a request, a refusal, a F.E.R.C. investigation and an ultimate ruling could prove too much for an I.P.P. to endure.

When taken in its entirety, this proposal would ease entry into the market by any potential I.P.P. If an I.P.P. had the requisite elements to manufacture, transmit, and distribute electricity, the generation industry would deregulate itself. Perfect competition could exist at the generation level, not because of a congressional mandate, but because any entrepreneur with a novel way to manufacture and efficiently market electricity, would be able to deliver his product. It is also highly unlikely that this proposal will spawn the same problems which required Congress to regulate electricity in the 1930s. The transmission and distribution grids are in place across the nation. At present, utilities serve the rural United States as efficiently as the urban areas.

The principle drawback of this proposal is the potential displacement of electricity service to rural areas. Arguably, utilities may find it unprofitable to serve sparsely populated areas and therefore discontinue service. There are two answers to this argument. First, utilities are not likely to sacrifice hundreds of millions of dollars already invested. If it becomes unprofitable to provide electricity, the utilities may merely raise their rates. Further, this proposal leaves the rate setting schemes intact. That is, if an I.P.P. can provide power more cheaply than the investor owned utility and the maximum rate allowed by F.E.R.C., then a competitive environment will flourish. If, however, an investor owned utility has no competition from an I.P.P., that does not leave the investor owned utility free to set whatever rate it wishes; it still must comply with F.E.R.C.'s enunciated rate scheme.

Another potential problem with this proposal is that an I.P.P. may still skim the cheapest customers and render the utilities as mere transfers of bulk power. Two remedies exist for this problem. First, the F.E.R.C. could develop a type of sliding scale where the cost of wheeling electricity would be inversely proportionate to the types and percentages of certain skimmed customers. If the F.E.R.C. found that there was a real and dangerous potential that a utility could not operate profitably as a direct result of wheeling energy for skimmed customers, then the F.E.R.C. could either allow the utility to charge more for wheeling or it could grant the utility the power to refuse to wheel. The scheme is consistent with the spirit of this proposal. In other words, to place the burden on the utility to prove why it should not have to wheel as opposed to requiring the I.P.P. to carry the burden. It is also important to realize that the I.P.P. may not be "skimming"; it simply may have developed a better and more efficient way to manufacture and deliver energy. This new technology will theoretically spur the public utility to develop new technologies so it may also efficiently and economically serve its customers.

## VI. CONCLUSION

The most expeditious, economical, and simple method to deregulate the generation industry is to amend P.U.R.P.A.. The status quo inherently precludes any I.P.P. from entering the market, thereby retarding growth and competition in the electricity industry. Because potential I.P.P.'s are uncertain with respect to wheeling electricity from manufacture to consumer, they are reluctant to invest millions of dollars in a generation plant. This factor, coupled with the increasing costs associ-

ated with constructing a large generation plant, leaves doubt as to the future supply of electricity. If F.E.R.C. could order a utility to wheel on behalf of another, competition would be fierce and electricity would remain affordable and abundant.

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