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## GONE FISSION: FEDERAL PREEMPTION AND THE RESURGENCE OF THE NUCLEAR INDUSTRY (THE ONE THAT ALMOST GOT AWAY)

### I. INTRODUCTION

Nuclear power represents more than 70 percent of our non-carbon generated electricity. It is unlikely that we can meet our aggressive climate goals if we eliminate nuclear power as an option.<sup>1</sup>

These statements come from the official campaign energy policy of President Barack Obama.<sup>2</sup> However, nuclear energy has not always been embraced as an environmentally friendly energy source. Only seventeen years ago, then Arkansas Governor William Clinton attacked his opponent for the 1992 Democratic nomination for president, Senator Paul Tsongas, accusing him of wanting to build “‘hundreds more’” nuclear reactors.<sup>3</sup> Tsongas adamantly denied these accusations from his competitor.<sup>4</sup> Another Democratic opponent, Iowa Senator Tom Harkin, ran ads against Tsongas claiming, “[t]here is no such thing as a pro-nuclear environmentalist.”<sup>5</sup> In contrast, by the 2008 presidential campaign, only one of the major Democratic candidates openly opposed exploration into expanded use of nuclear power.<sup>6</sup> The current support and national need for nuclear energy requires a clarification of federal preemption standards.

This Comment argues that since the Supreme Court’s ruling in *Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Commission*,<sup>7</sup> lower courts have consistently misapplied the preemption standards used to determine whether federal law preempts a state law regulating the nuclear industry. With the recent rebirth of the nuclear industry, a stable and predictable model is necessary to address the issue of preemption in the field of nuclear regulation.<sup>8</sup> Accordingly, Congress must revise federal law regulating nuclear energy to provide a clear framework to allow states to regulate those issues that Congress intended the states to

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1. OBAMA FOR AM., BARACK OBAMA AND JOE BIDEN: NEW ENERGY FOR AMERICA 6 (2008), [http://www.barackobama.com/pdf/factsheet\\_energy\\_speech\\_080308.pdf](http://www.barackobama.com/pdf/factsheet_energy_speech_080308.pdf).

2. *See generally id.*

3. Matthew L. Wald, *Why the Nuclear Debate May Be Mostly Hot Air*, N.Y. TIMES, Mar. 8, 1992, at E2.

4. *Id.*

5. *Id.*

6. *See* Edwin Chen, *Clinton, Obama Take Conciliatory Tone on Race in Nevada Debate*, BLOOMBERG.COM, Jan. 16, 2008, [http://www.bloomberg.com/apps/news?pid=20601103&sid=a6S4UO8I\\_zUo&refer=us](http://www.bloomberg.com/apps/news?pid=20601103&sid=a6S4UO8I_zUo&refer=us) (discussing John Edwards’s opposition to new nuclear power plants).

7. 461 U.S. 190 (1983).

8. *See infra* notes 170–73, 270–83 and accompanying text for a discussion of the importance of a clear power-sharing model.

manage.<sup>9</sup> Further, lower federal and state courts must be consistent in their application of the preemption doctrine in order to erase the confusion that exists today as to which state legislation of the nuclear industry is valid and which is not.<sup>10</sup>

Part II of this Comment examines the history of the nuclear industry from the development of the controlled nuclear fission reaction through the more than sixty years of federal and state regulation of the industry. Part II.A examines the legislative enactments passed by Congress to control the growth of the nuclear industry. Part II.B provides background on the nuclear industry, including the factors that led to its decline and recent resurrection. Part II.C examines the Supreme Court's interpretation of the congressional legislation, while Part II.D examines the interpretation of Supreme Court precedent, congressional legislation, and state regulations in the lower courts.

Part III.A specifies Congress's intended approach to statutory interpretation. Parts III.B and III.C examine preemption and critique the misguided application of statutory interpretation and Supreme Court precedent in lower court decisions. Finally, prior to concluding, Part III.D provides proposals for clarification, including new legislation to provide a clearer framework for shared power between the federal government and the states.

## II. OVERVIEW

### A. *The History of Nuclear Regulation*

Soon after the groundbreaking discovery of the controlled nuclear fission chain reaction, Congress enacted the Atomic Energy Act of 1946 (the "1946 Act").<sup>11</sup> The 1946 Act created the Atomic Energy Commission ("AEC"),<sup>12</sup> tasked with the mission to control nuclear research and explore the possibility of using nuclear technology for energy purposes.<sup>13</sup> The 1946 Act gave the federal government sole control over all areas of nuclear technology and development.<sup>14</sup>

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9. See *infra* Part III.D for a discussion of congressional revisions to the current power-sharing framework for nuclear matters.

10. See *infra* Part III.C for a discussion of the problems that can arise from inconsistent interpretation of the preemption doctrine in nuclear matters.

11. Atomic Energy Act of 1946, ch. 724, 60 Stat. 755 (codified as amended at 42 U.S.C. §§ 2011–2297 (2006)).

12. *Id.* § 2(a)(1), 60 Stat. at 756 (repealed 1974).

13. *Id.* § 3(a)–(b), 60 Stat. at 758–59 (codified as amended at 42 U.S.C. § 2051). The AEC was the overseer of all aspects of nuclear energy until Congress passed the Energy Reorganization Act of 1974, Pub. L. No. 93-438, 88 Stat. 1233 (codified as amended at 42 U.S.C. §§ 5801–5891). In this Act, Congress abolished the AEC, *id.* § 104(a), 88 Stat. at 1237 (codified at 42 U.S.C. § 5814(a)), and created the Energy Research and Development Administration ("ERDA") to control the development of nuclear weapons and other energy sources, *id.* §§ 2(b), 101, 88 Stat. at 1233–34 (codified at 42 U.S.C. §§ 5801(b), 5811), and the Nuclear Regulatory Commission ("NRC") to control nuclear regulatory functions, *id.* § 201, 88 Stat. at 1242 (codified as amended at 42 U.S.C. § 5841). The ERDA later combined with the Federal Energy Administration to form the Department of Energy ("DOE"). See generally 42 U.S.C. §§ 7131, 7151.

14. Atomic Energy Act of 1946 § 1(b)(3)–(5), 60 Stat. at 756 (codified as amended at 42 U.S.C. § 2013); see also *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 249 (1984) (mentioning federal monopoly on nuclear regulation lasting until 1954), *superseded by statute*, Price-Anderson Amendments Act of 1988, Pub. L. No.

The federal government passed a revised Atomic Energy Act in 1954 (the “1954 Act”) to encourage private investment and development of viable nuclear energy.<sup>15</sup> In the 1954 Act, Congress recognized the important role that the states, as well as private citizens, could play in the development of a viable nuclear energy industry.<sup>16</sup> While the 1954 Act’s claimed purpose was to seek more state involvement, it failed to lay out express provisions to transfer authority from the federal government to the states.<sup>17</sup> As a result, states began to pass their own legislation to assert regulatory control over the nuclear industry.<sup>18</sup>

To encourage further private investment in nuclear technology, Congress passed the Price-Anderson Act of 1957 (the “P-A Act”).<sup>19</sup> The P-A Act served to shield licensed facilities from unlimited liability.<sup>20</sup> If liability exceeded the amount of insurance that a facility carried, the AEC would reimburse the facility for the excess amount.<sup>21</sup> Finally, the P-A Act set a ceiling for damage awards.<sup>22</sup>

In 1959, Congress attempted to erase confusion concerning the balance of federal and state power in the nuclear industry.<sup>23</sup> Congress passed an amendment to the 1954 Act, known as the Cooperation with the States Amendment (the “1959 Amendment”).<sup>24</sup> While the purpose was “to promote an orderly regulatory pattern” between the federal government and the states,<sup>25</sup> the 1959 Amendment only succeeded in creating more confusion concerning the balance of power.<sup>26</sup>

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100-408, 102 Stat. 1066, *as recognized in* Koller v. Pinnacle W. Capital Corp., No. 06-2031, 2007 U.S. Dist. LEXIS 9186, at \*7, \*8 n.2 (D. Ariz. Feb. 6, 2007); Sharon A. De Louchrey, Student Article, *Radiological Emergency Response Plans: State Inaction May Demand Adherence to Current Trend of Preemption Doctrine*, 23 SUFFOLK U.L. REV. 1049, 1058 (1989) (mentioning federal government had control originally).

15. Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (codified as amended at 42 U.S.C. §§ 2011–2297 (2006)).

16. *See id.* § 3(d), 68 Stat. at 922 (codified as amended at 42 U.S.C. § 2013(d)) (encouraging “widespread participation” in development of nuclear energy); De Louchrey, *supra* note 14, at 1059 (discussing Congress’s changing perception of nuclear industry).

17. *See* De Louchrey, *supra* note 14, at 1059 (citing JOINT COMM. ON ATOMIC ENERGY, 86TH CONG., SELECTED MATERIALS ON FEDERAL-STATE COOPERATION IN THE ATOMIC ENERGY FIELD 3–4 (Comm. Print 1959) (averring ambiguity over state power)).

18. *See id.* at 1060 (analyzing belief among states that 1954 Act did not necessarily encroach on their powers); George T. Frampton, *Radiation Exposure—The Need for a National Policy*, 10 STAN. L. REV. 7, 29–40 (1957) (detailing early state regulation of nuclear industry).

19. Price-Anderson Act, Pub. L. No. 85-256, 71 Stat. 576 (1957) (codified as amended in scattered sections of 42 U.S.C.).

20. *Id.* sec. 4, § 170(c), 71 Stat. at 577 (codified as amended at 42 U.S.C. § 2210(c) (2006)).

21. *Id.*

22. *Id.*

23. Mark King, Note, *Federal Preemption of the State Regulation of Nuclear Power: State Law Strikes Back*, Silkwood v. Kerr-McGee Corporation, 104 S. Ct. 615 (1984), 60 CHI.-KENT L. REV. 989, 995–96 (1984).

24. Cooperation with States, Pub. L. No. 86-373, sec. 1, § 274, 73 Stat. 688 (1959) (codified as amended at 42 U.S.C. § 2021 (2006)).

25. *Id.* sec. 1, § 274(a)(3), 73 Stat. at 688 (codified as amended at 42 U.S.C. § 2021(a)(3)).

26. *See* King, *supra* note 23, at 996–1018 (detailing confusion arising from passage of 1959 Amendment).

The 1959 Amendment had several crucial sections concerning power division between the federal and state governments.<sup>27</sup> Subsection (b) provided that the AEC was “authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority” of the AEC for certain materials, including byproduct materials, source materials, and “[s]pecial nuclear materials in quantities not sufficient to form a critical mass.”<sup>28</sup>

Subsection (c) laid out areas over which the federal government retained exclusive control, including regulation of

- (1) the construction and operation of any production or utilization facility or any uranium enrichment facility;
- (2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;
- (3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;
- (4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.<sup>29</sup>

Additionally, subsection (c) empowers the federal government to determine whether “all applicable standards and requirements have been met” before terminating a license for byproduct material.<sup>30</sup> The 1959 Amendment also placed control over the transfer of materials and equipment covered by the 1954 Act in the federal government.<sup>31</sup>

Subsection (k) of the 1959 Amendment causes much of the confusion regarding the joint role of the state and federal governments.<sup>32</sup> According to the subsection, “[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.”<sup>33</sup> No other language besides this, and the previously mentioned areas over which the federal government has exclusive control,<sup>34</sup> conclusively mentions that a state lacks authority to legislate certain matters concerning the nuclear industry.<sup>35</sup>

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27. See Cooperation with States, sec. 1, § 274(b)–(c), 73 Stat. at 689 (codified as amended at 42 U.S.C. § 2021(b)–(c)) (authorizing Commission to enter into agreements with states).

28. *Id.* sec. 1, § 274(b), 73 Stat. at 689 (codified as amended at 42 U.S.C. § 2021(b)). Under these agreements, the AEC could turn over regulatory authority of certain radioactive or nuclear materials to the states. *Id.*

29. *Id.* sec 1, § 274(c), 73 Stat. at 689 (codified as amended at 42 U.S.C. § 2021(c)).

30. *Id.*

31. Cooperation with States, sec. 1, § 274(c), 73 Stat. at 689 (codified as amended at 42 U.S.C. § 2021(c)).

32. See De Louchrey, *supra* note 14, at 1061 (discussing subsection (k) ambiguity).

33. Cooperation with States, sec. 1, § 274(k), 73 Stat. at 689 (codified as amended at 42 U.S.C. § 2021(k)).

34. See *supra* notes 29–31 and accompanying text for a discussion of areas over which the federal government retains exclusive control.

35. Cooperation with States, sec. 1, § 274(k), 73 Stat. at 689 (codified as amended at 42 U.S.C. § 2021(k)).

While subsection (k) specifically provides that state authority is limited to nonradiological matters, the legislative history of the 1959 Amendment contains evidence that lawmakers did originally intend for federal preemption in many matters.<sup>36</sup> Congress anticipated that states would attempt to regulate the nuclear industry with or without federal regulations in place.<sup>37</sup> However, when the 1959 Amendment passed, congressional leaders felt that states had not developed sufficiently sophisticated capabilities to regulate most areas of nuclear technology on their own.<sup>38</sup> Despite the contradictory language in the 1959 Amendment, Congress felt that the federal courts were the best place to deal with the issue of preemption.<sup>39</sup> As states developed sufficient regulatory means, Congress felt that the federal courts could determine if states were able to accept a role.<sup>40</sup> Although the 1959 Amendment provided that the courts must invalidate all state regulation regarding radiation,<sup>41</sup> its effect on nonradiological state legislation and legislation that was arguably radiation related remained unclear.<sup>42</sup>

#### B. *The Nuclear Industry Today*

The nuclear industry, so active and well regarded early in its development, hit a major slump beginning in the late 1970s.<sup>43</sup> From 1970 through 1990, the federal government issued one hundred licenses to operate nuclear reactors.<sup>44</sup> Following this boom in licensing, numbers dropped off significantly with only four licenses issued between 1990 and 1996, and none after that, until 2003.<sup>45</sup> As of 2009, no new nuclear plant has been built in the United States in approximately thirty years.<sup>46</sup> The partial meltdown at Three Mile Island Nuclear Generating Station in 1979 is often seen as the main factor in the slowdown of the construction of plants.<sup>47</sup> High costs and overly

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36. See Frampton, *supra* note 18, at 47–52 (discussing federal preemption in various proposed amendments to 1954 Act).

37. *Id.* at 40.

38. *Id.* at 37.

39. See, e.g., *id.* at 40 (letting courts interpret framework in light of developing state capabilities).

40. See *id.* at 30–35 (demonstrating increasing state involvement).

41. John-Mark Stensvaag, *State Regulation of Nuclear Generating Plants Under the Clean Air Act Amendments of 1977*, 55 S. CAL. L. REV. 511, 520 (1982) (citing David F. Cavers, *State Responsibility in the Regulation of Atomic Reactors*, 50 KY. L.J. 33, 48 (1961)).

42. See *id.* at 520–33 (stating that even after 1959 Amendment many states continued to pass regulations concerning nuclear safety).

43. Neal H. Lewis, *Interpreting the Oracle: Licensing Modifications, Economics, Safety, Politics, and the Future of Nuclear Power in the United States*, 16 ALB. L.J. SCI. & TECH. 27, 28 (2006) (discussing company's withdrawing over 100 permits issued to construct nuclear facilities in 1970s and 1980s and continuing decline in number of permits issued to operate nuclear facilities).

44. *Id.* (citing U.S. NUCLEAR REGULATORY COMM'N, NUREG-1350, VOL. 16, REV. 1, INFORMATION DIGEST 2004–2005, at 10–11).

45. *Id.*

46. U.S. Dep't of Energy, Nuclear Power 2010, <http://www.ne.doe.gov/np2010/overview.html> (last visited Jan. 3, 2010).

47. Roland M. Frye, Jr., *Restricted Communications at the United States Nuclear Regulatory Commission*, 59 ADMIN. L. REV. 315, 318 (2007).

optimistic expectations for nuclear power to become a replacement energy source were also factors in the slump.<sup>48</sup>

A National Energy Policy Report from 2001 recommended an expansion of the role of nuclear energy in the United States' energy policy.<sup>49</sup> While a few plants had closed during the 1990s, the operating capacity of the 103 remaining plants had increased over that same time due to increased demand.<sup>50</sup> In response, the U.S. Department of Energy ("DOE") unveiled in 2002 the Nuclear Power 2010 Program (the "Program").<sup>51</sup> The Program is a "joint government/industry cost-shared effort to identify sites for new nuclear power plants, develop and bring to market advanced nuclear plant technologies, evaluate the business case for building new nuclear power plants and demonstrate untested regulatory processes."<sup>52</sup> The Program cited the overreliance on one fuel source, such as coal or natural gas, as a potential "vulnerability to the long-term security of our Nation's energy supply."<sup>53</sup> Additionally, because nuclear power plants do not produce the same emissions as fossil fuel plants,<sup>54</sup> new plants could address many environmental concerns, particularly global climate change and air quality.<sup>55</sup>

Following the release of the Program, Congress passed the Energy Policy Act of 2005 (the "2005 Act") to address many of the economic concerns associated with building new plants.<sup>56</sup> First, Congress extended the protection of the P-A Act through 2025.<sup>57</sup> Additionally, the federal government agreed to cover cost overruns caused by regulatory issues up to \$500 million for the first two reactors built, and \$250 million for the next four.<sup>58</sup>

The results of the Program and the 2005 Act have been demonstrated in increased applications for construction permits. During the fall of 2003, the NRC received applications for three Early-Site Permits ("ESPs"),<sup>59</sup> the first step in the process of

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48. *Id.*

49. NAT'L ENERGY POLICY DEV. GROUP, RELIABLE, AFFORDABLE, & ENVIRONMENTALLY SOUND ENERGY FOR AMERICA'S FUTURE 5-17 (2001) [hereinafter NEP], available at <http://www.ne.doe.gov/pdfFiles/nationalEnergyPolicy.pdf>.

50. *Id.* at 5-15.

51. U.S. Dep't of Energy, *supra* note 46.

52. *Id.*

53. U.S. DEP'T OF ENERGY, NUCLEAR POWER 2010 PROGRAM FACT SHEET 2 (2009), [http://www.ne.doe.gov/pdfFiles/factSheets/NP2010\\_Sept09.pdf](http://www.ne.doe.gov/pdfFiles/factSheets/NP2010_Sept09.pdf).

54. See NEP, *supra* note 49, at 1-6 (discussing pollutants released from coal and natural gas plants that are not released from nuclear plants).

55. *Id.*

56. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended in scattered sections of 26 U.S.C and 42 U.S.C.).

57. *Id.* § 602, 119 Stat. at 779 (codified as amended at 42 U.S.C. § 2210 (2006)). See also *supra* notes 19-22 and accompanying text for an account of the P-A Act.

58. *Id.* § 638, 119 Stat. at 791-94 (codified at 42 U.S.C. § 16014). Additionally, for the first eight years of production, Congress allowed a 1.8 cents per kilowatt-hour production credit for the first 6,000 megawatt hours up to \$125 million annually to assist the plants in covering construction costs for new facilities. *Id.* § 1306(a), 119 Stat. at 997-98 (codified as amended at 26 U.S.C. § 45J (Supp. 2008)).

59. U.S. NRC, Issued Early Site Permit—Clinton Site (Aug. 28, 2008), <http://www.nrc.gov/reactors/new-reactors/esp/clinton.html>; U.S. NRC, Issued Early Site Permit—Grand Gulf Site (Aug. 28, 2008),

constructing a new plant.<sup>60</sup> Additionally, on September 20, 2007, NRG Energy, Inc. and STP Nuclear Operating Co. filed an application for a Combined Construction and Operating License (“COL”) to construct new reactors at an existing plant.<sup>61</sup>

Between November 29, 2007 and March 23, 2010, the NRC accepted seventeen applications for licenses (a variety of ESPs and COLs) for twenty-six new reactors.<sup>62</sup> No reviews are currently ongoing.<sup>63</sup> Plus, the NRC expects at least four more license applications through 2011.<sup>64</sup> If these efforts by the federal government and private investors are successful, a new wave of nuclear plant construction may occur over the next few years. Confusion regarding the scope of state legislation will undoubtedly come to the forefront. Therefore, Congress must address the unclear balance between federal and state authority in the regulation of nuclear matters that has arisen because of the decisions described below.

### C. Preemption and the Supreme Court

The ambiguous character of federal nuclear regulation embodied in the 1954 Act and the 1959 Amendment,<sup>65</sup> spurred much litigation as to whether federal law preempts state nuclear regulation.<sup>66</sup> Notwithstanding the intricacies of nuclear regulation, some basic concepts govern federal preemption. While federal law is the “supreme Law of the Land” under the Constitution,<sup>67</sup> states can point to the Tenth Amendment as a prerogative to act in areas not governed by federal law.<sup>68</sup>

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<http://www.nrc.gov/reactors/new-reactors/esp/grand-gulf.html>; U.S. NRC, Issued Early Site Permit—North Anna Site (Aug. 28, 2008), <http://www.nrc.gov/reactors/new-reactors/esp/north-anna.html>. See generally NUCLEAR REGULATORY COMM’N, EXPECTED NEW NUCLEAR POWER PLANT APPLICATIONS, <http://www.nrc.gov/reactors/new-reactors/new-licensing-files/expected-new-rx-applications.pdf> (last visited Jan. 12, 2010).

60. The early site permit allows the NRC to approve sites “independent of an application for a construction permit or combined license.” U.S. NRC, Early Site Permit Applications for New Reactors (Sept. 2, 2009), <http://www.nrc.gov/reactors/new-reactors/esp.html>.

61. U.S. NRC, South Texas Project, Units 3 and 4 Application (July 7, 2009), <http://www.nrc.gov/reactors/new-reactors/col/south-texas-project.html>. The NRC introduced COLs in 2007 as part of a streamlining process to prevent delays and high costs that contributed to the nuclear downturn. See 10 C.F.R. § 52.71 (2007) (discussing procedures and requirements relating to issuance of COLs); Christopher C. Chandler, *Recent Developments in Licensing and Regulation at the Nuclear Regulatory Commission*, 58 Admin. L. Rev. 485, 491 (2006) (mentioning NRC’s desire to streamline licensing). Rather than applying for construction and operating licenses separately, applicants can now apply for them together, along with design certifications and ESPs. 10 C.F.R. §§ 52.13, 52.73.

62. NUCLEAR REGULATORY COMM’N, *supra* note 59.

63. *Id.*

64. *Id.*

65. See *supra* notes 15–18 and 23–42 for a discussion of the 1954 Act and 1959 Amendment and the uncertainty that arose from each.

66. See generally James L. Buchwalter, Annotation, *Preemption Issues Under Atomic Energy Act of 1954, §§ 1 et seq., 42 U.S.C.A. §§ 2011 et seq.*, 198 A.L.R. FED. 147 (2004) (briefing numerous cases that have debated preemption issue).

67. U.S. CONST. art. VI, cl. 2.

68. The Tenth Amendment provides that “powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” U.S. CONST. amend. X.

Because of the variety of conflicts that can arise between federal and state law, the Supreme Court has decided that there are three methods to determine whether a federal law preempts state law.<sup>69</sup> First, Congress may preempt state law “by so stating in express terms.”<sup>70</sup> Second, if there is no explicit language, federal law preempts state law if a congressional intent to preempt can be found in “a scheme of federal regulation . . . so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it.”<sup>71</sup> Third, federal law preempts if the state law actually conflicts with federal law, making compliance with both laws “a physical impossibility,”<sup>72</sup> or if the state law interferes with the “objectives of Congress.”<sup>73</sup>

Despite the numerous conflicts between the federal government and the states concerning nuclear regulation preemption,<sup>74</sup> the issue has come before the Supreme Court only a few times.<sup>75</sup> The issue was first taken up in 1972 in *Minnesota v. Northern States Power Co.*,<sup>76</sup> after the Eighth Circuit Court of Appeals found that a Minnesota nuclear regulation fell under subsection (c) of the 1959 Amendment, noting that the subsection explicitly gave the AEC complete control over regulation of radiation hazards, particularly the “construction and operation” of nuclear plants.<sup>77</sup> Minnesota had passed legislation regulating radioactive and gas discharges from nuclear facilities far more strictly than under the 1954 Act.<sup>78</sup> Therefore, according to the Eighth Circuit, the federal law impliedly preempted the state regulations because the state regulations could interfere with the objectives of Congress in maintaining safety and promoting nuclear development.<sup>79</sup> Under the 1959 Amendment, the Eighth Circuit found that the federal government had sole control of emissions regulations.<sup>80</sup> In 1972, the Supreme Court affirmed the ruling of the Eighth Circuit, without an opinion.<sup>81</sup>

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69. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 203–04 (1983).

70. *Id.* at 203 (citing *Jones v. Rath Packing Co.*, 430 U.S. 519, 525 (1977)).

71. *Id.* at 204 (alteration in original) (quoting *Fid. Fed. Sav. & Loan Ass'n v. de la Cuesta*, 458 U.S. 141, 153 (1982)) (internal quotation marks omitted).

72. *Id.* (quoting *Fla. Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142–43 (1963)).

73. *Id.* (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)).

74. See *infra* Parts II.D.1 and II.D.2 for a discussion of conflicts in circuit, district, and state court decisions.

75. See generally *English v. Gen. Elec. Co.*, 496 U.S. 72 (1990); *Goodyear Atomic Corp. v. Miller*, 486 U.S. 174 (1988); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984), *superseded by statute*, Price-Anderson Amendments Act of 1988, Pub. L. No. 100-408, 102 Stat. 1066, *as recognized in* *Koller v. Pinnacle W. Capital Corp.*, No. 06-2031, 2007 U.S. Dist. LEXIS 9186, at \*7, \*8 n.2 (D. Ariz. Feb. 6, 2007); *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190 (1983); *Minnesota v. N. States Power Co.*, 405 U.S. 1035 (1972).

76. 405 U.S. 1035 (1972).

77. *N. States Power Co. v. Minnesota*, 447 F.2d 1143, 1149 n.6 (8th Cir. 1971) (quoting 42 U.S.C. § 2021(c) (2006)), *aff'd mem.*, 405 U.S. 1035 (1972). See *supra* notes 29–31 and accompanying text for a discussion of subsection (c).

78. *N. States*, 447 F.2d at 1144–45.

79. *Id.* at 1150–52.

80. *Id.* at 1149.

81. *N. States Power Co.*, 405 U.S. 1035.



For many years, *Northern States* was the standard regarding preemption in the nuclear field.<sup>82</sup> In 1983, however, the Supreme Court severely limited *Northern States* in *Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Commission*.<sup>83</sup> *Pacific Gas* is now the central and guiding ruling for nuclear preemption matters.<sup>84</sup> The *Pacific Gas* Court clarified that states do have the power to regulate nuclear matters as long as the regulation does not deal with radiological or safety issues.<sup>85</sup> In this case, California had passed a statute preventing construction of new nuclear plants until the NRC produced a plan to deal with spent nuclear material.<sup>86</sup> The State claimed that the objective of the legislation was economic in nature, rather than safety related.<sup>87</sup> The State argued that the possibility of full waste storage facilities could lead to plant shutdowns, which would have devastating economic effects.<sup>88</sup> In response, several utility companies sued the State, claiming that the state law impeded on an area governed by federal regulation, specifically section (k) of the 1959 Amendment, and federal authority to regulate safety matters.<sup>89</sup> In the 1983 decision, the Supreme Court unanimously decided that the state statute was legitimate and not preempted.<sup>90</sup>

The Court in *Pacific Gas* determined that, while the federal government had exclusive control over safety and radiological areas of nuclear regulation, states could legislate in nonradiological areas.<sup>91</sup> Further, federal power should be construed narrowly, and an ulterior motive should not be read into state legislation in order to improperly conceive of it as under the umbrella of federal control.<sup>92</sup> Since the claimed purpose of the state statute was economic, rather than safety related, the law was valid and not preempted.<sup>93</sup> The *Pacific Gas* Court stated that the “[n]eed for new power facilities [including a decision not to build one], their economic feasibility, and rates and services, are areas that have been characteristically governed by the States.”<sup>94</sup> States hold “traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like.”<sup>95</sup> If Congress feels that the state’s motive is not economic, but rather safety related, it

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82. De Louchrey, *supra* note 14, at 1065; see, e.g., *Illinois v. Kerr-McGee Chem. Corp.*, 677 F.2d 571, 581 (7th Cir. 1982) (adopting reasoning of *Northern States* in finding preemption of Minnesota law that required tougher standards on radioactive effluents).

83. 461 U.S. 190 (1983).

84. See King, *supra* note 23, at 989–90 (mentioning *Pacific Gas* as drastically changing law on federal preemption).

85. *Pac. Gas*, 461 U.S. at 212.

86. *Id.* at 198, 212.

87. *Id.* at 199–200, 213.

88. *Id.* at 196–98.

89. *Id.* at 198.

90. *Id.* at 216.

91. *Id.* at 212.

92. *Id.* at 216.

93. *Id.* at 212–13, 216.

94. *Id.* at 205.

95. *Id.* at 212.

“should be up to Congress to determine whether a State has misused the authority left in its hands.”<sup>96</sup>

Further, Congress gave states the authority to regulate the nuclear industry and slow its development.<sup>97</sup> If the actions of the states concern Congress, it is within congressional authority to “rethink the division of regulatory authority in light of its possible exercise by the States to undercut a federal objective.”<sup>98</sup> Here, the Court found that, while the purposes of the 1954 Act and 1959 Amendment are to encourage development of nuclear power, the state regulation preventing construction of new plants did not frustrate this purpose to such a degree as to be preempted.<sup>99</sup> The California legislature drafted its regulations to avoid preemption by relying on traditional state powers rather than safety or radiological concerns.<sup>100</sup>

The Supreme Court handed down another decision that further weakened the *Northern States* standard in 1984, upholding a damages ruling under state law in *Silkwood v. Kerr-McGee Corp.*<sup>101</sup> In that case, plutonium contaminated Karen Silkwood during her work at a nuclear plant.<sup>102</sup> Her estate sued the nuclear power plant for contamination injuries to the decedent and her property.<sup>103</sup> Although there is tension between the idea that safety regulation is the exclusive concern of federal law and the idea that a state may award damages based on state law, the Supreme Court held that the damage award against the utility was not an imposition on nuclear safety.<sup>104</sup> According to the opinion, Congress intended to stand by both positions and to tolerate the tension.<sup>105</sup> Although a nuclear plant may be “threatened with damages liability if it does not conform to state standards,” Congress was willing to allow this tension between preemption of state safety-related standards and damages liability.<sup>106</sup> Paying federal and state fines was not a physical impossibility, and awarding punitive damages under state law did not interfere with the federal scheme.<sup>107</sup> While a major federal objective was to promote nuclear power, it was illogical to think that development would not be without costs to nuclear facilities.<sup>108</sup> Therefore, allowing recovery under

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96. *Id.* at 216.

97. *Id.* at 223.

98. *Id.*

99. *Id.* at 221–22.

100. *Id.* at 221–22.

101. 464 U.S. 238, 258 (1984), *superseded by statute*, Price-Anderson Amendments Act of 1988, Pub. L. No. 100-408, 102 Stat. 1066, *as recognized in* *Koller v. Pinnacle W. Capital Corp.*, No. 06-2031, 2007 U.S. Dist. LEXIS 9186, at \*7, \*8 n.2 (D. Ariz. Feb. 6, 2007); *see also* Karen Goxem, *Emergency Offsite Planning for Nuclear Power Plants: Federal Versus State and Local Control*, 37 AM. U.L. REV. 417, 427 (1988) (stating that *Pacific Gas* and *Silkwood* show Supreme Court’s readiness to allow states more involvement in nuclear regulation, even if this requires states becoming involved in safety issues).

102. *Silkwood*, 464 U.S. at 238.

103. *Id.*

104. *Id.* at 256.

105. *Id.*

106. *Id.*

107. *Id.* at 257.

108. *Id.*

state tort law for injuries in no way impeded the federal government's ability to regulate the nuclear industry.<sup>109</sup>

Four years later, in *Goodyear Atomic Corp. v. Miller*,<sup>110</sup> the Supreme Court decided that incidental state safety regulations are acceptable under the congressional scheme.<sup>111</sup> Thus, nothing under federal regulations prevented an award of additional compensation to workers at a federally owned nuclear production facility pursuant to a state health and safety regulation.<sup>112</sup> In the case, a worker at the facility was injured in a fall and received workers' compensation, but later filed for additional compensation because the employer had violated a state safety statute.<sup>113</sup> The Court found that, because the state regulation on safety was not aimed directly at the federal facility, federal law did not preempt the state award of additional workers' compensation.<sup>114</sup>

In the most recent Supreme Court ruling concerning nuclear regulation, *English v. General Electric Co.*,<sup>115</sup> the Court reversed the decision of the Fourth Circuit Court of Appeals and held that an action under state law for intentional infliction of emotional distress did not "fall within the pre-empted field of nuclear safety as that field has been defined in prior cases."<sup>116</sup> In the case, an employee at a nuclear facility repeatedly complained about safety violations at the facility, particularly failures by coworkers to clean up spills.<sup>117</sup> To show the failure of safety procedures at the plant, the employee deliberately left contaminated materials on a worktable.<sup>118</sup> Several days later, the employee notified a supervisor that the table had not been cleaned.<sup>119</sup> Following administrative review, General Electric fired the employee.<sup>120</sup> In response, the employee filed an action under state law for intentional infliction of emotional distress.<sup>121</sup> The Court found that "for a state law to fall within the pre-empted zone, it must have some *direct and substantial* effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels."<sup>122</sup> According to the Court, while a claim for intentional infliction of emotional distress may have some effect on safety concerns, it is neither direct nor substantial.<sup>123</sup>

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109. *Id.* at 257–58.

110. 486 U.S. 174 (1988).

111. *Goodyear*, 486 U.S. at 186.

112. *Id.* at 185–86.

113. *Id.* at 176–77.

114. *Id.* at 185.

115. 496 U.S. 72 (1990).

116. *English*, 496 U.S. at 90.

117. *Id.* at 74–75.

118. *Id.* at 75.

119. *Id.*

120. *Id.*

121. *Id.* at 77.

122. *Id.* at 85 (emphasis added). Radiological safety concerns did not motivate the state tort law. *Id.* at 84. Such motivations would have led to preemption. *Id.*

123. *Id.* at 85.

To sum up, the Court has significantly modified the *Northern States* standard of total federal control of nuclear regulation.<sup>124</sup> The current standard used to interpret the meaning of the 1954 Act and the 1959 Amendment is the one laid down in *Pacific Gas*.<sup>125</sup> This standard, termed “direct and substantial” in *English*, provides that a state regulation with a direct and substantial effect on radiological or safety issues, or in conflict with a named federal power, is preempted by federal law.<sup>126</sup>

#### D. Other Nuclear Litigation

Despite the Supreme Court trend preserving state law against preemption challenges in the nuclear arena, many lower courts continue to follow the outdated *Northern States* standard.<sup>127</sup> State and federal courts have differed in their interpretations regarding what is and what is not radiological or safety related and, therefore, permissible state regulation.<sup>128</sup>

##### 1. Cases Where State Law Has Been Preempted Because of Purported Interference with Radiological or Safety Issues

Despite the Supreme Court’s balanced approach to preemption embraced in *Pacific Gas*,<sup>129</sup> some state and lower federal courts have still been unreceptive to the idea of state participation in nuclear regulation.<sup>130</sup> The “approval or siting of a nuclear facility . . . , construction or operation of nuclear plants, and disaster planning and preparedness” have led to divergent opinions in different courts.<sup>131</sup>

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124. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 212 (1983).

125. *See id.* at 212–16 (finding that scope of federal law should be construed narrowly to allow states to govern traditional areas of state control).

126. *English*, 496 U.S. at 85; *accord Pac. Gas*, 461 U.S. at 212–13 (laying out standard for preemption in nuclear matters).

127. *See De Louchrey, supra* note 14, at 1050 (discussing how lower courts are more inclined to find preemption than Supreme Court).

128. *See generally* Buchwalter, *supra* note 66 (analyzing numerous cases that have debated preemption issue). State court rulings have produced mixed results regarding preemption. *Compare* *Citizens Regulatory Comm’n v. Downes*, No. CV 980581304S, 1998 WL 845893, at \*1–3 (Conn. Super. Ct. Nov. 5, 1998) (finding preemption of state law allowing citizens to make complaints about dangerous conditions because law affected safety), *and* *Me. Yankee Atomic Power Co. v. Me. Pub. Utils. Comm’n*, 581 A.2d 799, 805–06 (Me. 1990) (finding federal government intended to control all issues concerning safety, including decommissioning), *with* *People ex rel. Hartigan v. Kerr-McGee Chem. Corp.*, 568 N.E.2d 921, 926 (Ill. App. Ct. 1991) (finding regulation requiring facility compliance with environmental construction permit requirements valid), *and* *Kan. Gas & Elec. Co. v. State Corp. Comm’n*, 720 P.2d 1063, 1086–87 (Kan. 1986) (finding state regulation of electrical rates not preempted because states maintained traditional responsibility in regulating such concerns as need, reliability, and cost).

129. *See supra* notes 83–100 and accompanying text for a discussion of *Pacific Gas*.

130. *See generally* Buchwalter, *supra* note 66 (listing numerous cases in which lower courts have found state law preempted).

131. *Id.* at 161 (citation omitted). *See generally* Goxem, *supra* note 101, at 451 (calling for Congress to clear up ambiguity regarding how far state can go in regulating nuclear energy).

Since *Pacific Gas*, most courts have found federal preemption in cases involving state regulation of nuclear matters.<sup>132</sup> As discussed below, courts in the Eighth and Ninth Circuits in particular have found that the power of the federal government to regulate nuclear issues is broad and that much of the state legislation at least indirectly impacts safety or radiological issues and is thus preempted by federal law.<sup>133</sup>

For example, in *Missouri v. Westinghouse Electric, LLC*,<sup>134</sup> the District Court for the Eastern District of Missouri found that a state hazardous waste regulation requiring the owner of a decommissioned nuclear facility to conduct certain studies was preempted.<sup>135</sup> The state claimed that the preempting federal law did not apply to decommissioned facilities, not all contamination at the site was radiation related, and the state regulation specifically avoided language that could lead to preemption.<sup>136</sup> Nevertheless, the court found preemption because the state regulation affected radiological materials, an area of exclusive federal control under the 1954 Act and the 1959 Amendment, according to *Pacific Gas*.<sup>137</sup>

As another example, in *Northern States Power Co. v. Prairie Island Mdewakanton Sioux Indian Community*,<sup>138</sup> the District Court for the District of Minnesota found that, under *Pacific Gas*, the limited powers that Congress granted states over nuclear matters did not allow for enactment of an ordinance<sup>139</sup> concerning construction of a waste facility.<sup>140</sup> In its reasoning, the district court reiterated the Supreme Court's finding in *Northern States Power Co. v. Minnesota* that "the federal government has exclusive authority under the doctrine of pre-emption to regulate the construction and operation of nuclear power plants."<sup>141</sup>

In *Nevada v. Watkins*,<sup>142</sup> the Ninth Circuit held that, although Congress had not "expressly preempted the field of nuclear waste disposal" in any previous legislation, a Nevada law was preempted because it stood as an obstacle to the objectives of

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132. See generally Buchwalter, *supra* note 66 (analyzing numerous cases in which lower courts have found state law preempted by federal law).

133. Additionally, the Tenth Circuit has deferred to the federal government extensively in preemption matters. See *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1246 (10th Cir. 2004) (suggesting that all state nuclear regulations that affect safety, even if not directly, will be preempted). Other circuits have also come down on the federal government's side in cases involving state statutes that purported to concern environmental or economic issues. See *United States v. Kentucky*, 252 F.3d 816, 823–25 (6th Cir. 2001) (finding states could not impose upon federal government's control of safety issues in waste disposal); *Jersey Cent. Power & Light Co. v. Township of Lacey*, 772 F.2d 1103, 1112 (3d Cir. 1985) (finding preemption of local ordinance prohibiting importation of spent nuclear fuel, despite local insistence that purpose of ordinance was economic in nature).

134. 487 F. Supp. 2d 1076 (E.D. Mo. 2007).

135. *Westinghouse Elec.*, 487 F. Supp. 2d at 1085–87.

136. *Id.* at 1086.

137. *Id.* at 1085–87.

138. 781 F. Supp. 612 (D. Minn. 1991), *aff'd*, 991 F.2d 458 (8th Cir. 1993).

139. A Native American tribe adopted an ordinance regulating radioactive transportation and the building of a waste storage plant. *N. States Power Co.*, 781 F. Supp. at 613.

140. *Id.* at 618.

141. *Id.* (quoting *N. States Power Co. v. Minnesota*, 447 F.2d 1143, 1154 (8th Cir. 1971), *aff'd mem.*, 405 U.S. 1035 (1972)).

142. 914 F.2d 1545 (9th Cir. 1990).

Congress.<sup>143</sup> In that case, the state had passed a law making it “unlawful for any person or governmental entity to store high-level radioactive waste in Nevada.”<sup>144</sup> Although the state law purported to arise out of stated economic and environmental concerns, that was not the only factor for the court to consider.<sup>145</sup> The court stated that, under *Pacific Gas*, it must also examine the law’s “actual effect on nuclear safety,” which, in this case, would frustrate congressional attempts to dispose of nuclear waste safely.<sup>146</sup>

Finally, in *United States v. Manning*,<sup>147</sup> the Ninth Circuit ruled that federal law preempted a Washington State law requiring the total cleanup of contamination from the site before any new radioactive material could be added.<sup>148</sup> The federal government had sole authority to regulate waste disposal, according to the court.<sup>149</sup> The Ninth Circuit found that the state act interfered with federal power because it regulated both radioactive and nonradioactive waste, areas of federal domain under the 1954 Act and 1959 Amendment.<sup>150</sup>

## 2. Rulings in Which Courts Have Taken a More Balanced Approach

Despite many lower federal and state courts’ strong support for federal preemption in nuclear cases, some other lower federal and state courts have been more willing to allow states to regulate in the area. Since *Pacific Gas*, courts have found that federal law does not preempt state law in several cases.<sup>151</sup> For example, the Seventh Circuit has taken a more balanced view of preemption under the 1954 Act and 1959 Amendment.<sup>152</sup> In *Brown v. Kerr-McGee Chemical Corp.*,<sup>153</sup> the Seventh Circuit ruled that the plaintiffs were free to bring an action against a chemical company under state law as long as the action did not involve radiological matters.<sup>154</sup> There, the plaintiffs sought an injunction requiring the chemical company to remove toxic waste.<sup>155</sup> The

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143. *Watkins*, 914 F.2d at 1560–61.

144. *Id.* at 1560 (quoting NEV. REV. STAT. § 459.910(1) (1989)).

145. *Id.* at 1561.

146. *Id.* (quoting *English v. Gen. Elec. Co.*, 496 U.S. 72, 84 (1990)).

147. 527 F.3d 828 (9th Cir. 2008).

148. *Manning*, 527 F.3d at 831.

149. *Id.* at 837–39.

150. *Id.* While there may be nonradioactive waste that the state can govern, the nonradioactive waste that the state sought to regulate was mixed with the radioactive waste. *Id.* at 833. Therefore, the state’s regulation of it was impermissible in this instance. *Id.* at 837–39.

151. Additionally, a valuable pre-*Pacific Gas* model case is *Northern California Ass’n to Preserve Bodega Head & Harbor v. Public Utilities Commission*, 390 P.2d 200 (Cal. 1964). In that case, the court found that, under the 1959 Amendment, a state commission “unquestionably ha[d] authority to inquire into safety questions apart from radiation hazards.” *Id.* at 204. The location of the plant near earthquake faults meant that the state had to consider many other issues other than radiation hazards so state regulation was permissible. *Id.* at 204.

152. See, e.g., *Kerr-McGee Chem. Corp. v. City of West Chicago*, 914 F.2d 820, 821–22, 826–27 (7th Cir. 1990) (finding enforcement of city erosion and sedimentations regulations not preempted because there was no direct interference with radiological matters).

153. 767 F.2d 1234 (7th Cir. 1985).

154. *Brown*, 767 F.2d at 1241.

155. *Id.* at 1236–37.

court found “no explicit congressional intent or pervasive federal scheme that preempts the state laws relied on by plaintiffs.”<sup>156</sup> The laws the plaintiffs relied on did not specifically concern radiation hazards, but rather regulated “pollution standards, building codes, and public nuisance.”<sup>157</sup> Therefore, there was no federal preemption to prevent their state lawsuit from going forward theoretically, although the court did find preemption necessary for other reasons.<sup>158</sup>

Other circuits have also attempted to identify the fine line between preemption and legitimate state action. For instance, in *Maine Yankee Atomic Power Co. v. Bonsey*,<sup>159</sup> the District Court for the District of Maine held that a state may regulate the nonradiological aspects of spent fuel storage.<sup>160</sup> Here, a power company challenged a Maine law that required state approval “before construction or operation of ‘any development of state or regional significance that may substantially affect the environment.’”<sup>161</sup> The court determined that the state investigation contemplated by the law did not “strictly speaking, involve authorizing plaintiff to receive, transfer, or possess spent nuclear fuel, but [sought] to regulate, in some manner, the site development necessarily associated with” construction of a waste development site.<sup>162</sup> The court held that deference must be given to the state assertions that the state did not intend to regulate radiological areas, and, therefore, federal law did not preempt the state investigation.<sup>163</sup>

With the increasing demand to shift away from oil to alternative energies such as nuclear energy,<sup>164</sup> the unclear balancing of federal and state authority will undoubtedly come to the forefront. Courts will need to address consistently the unclear issues concerning the balance of state and federal power in nuclear matters. While permits have been issued,<sup>165</sup> little action has occurred in the construction of new plants. Therefore, preemption issues must be viewed in light of existing case law, and under existing federal provisions, including the 2005 Act and the Program.

### III. DISCUSSION

*Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Commission*<sup>166</sup> was the correct interpretation of the revised Atomic

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156. *Id.* at 1241.

157. *Id.*

158. *Id.* However, due to the mixing of radiological and nonradiological materials at the site, the court found preemption because the nonradiological waste could not be removed without also removing the radioactive waste. *Id.* at 1243.

159. 107 F. Supp. 2d 47 (D. Me. 2000).

160. *Me. Yankee*, 107 F. Supp. 2d at 54.

161. *Id.* at 49 (quoting ME. REV. STAT. ANN. tit. 38, § 483-A (Supp. 1999)).

162. *Id.* at 53.

163. *Id.* at 55–56.

164. See *supra* notes 1–6, 49–64, and accompanying text for a discussion of nuclear power as an alternative energy source.

165. See *supra* notes 59–64 and accompanying text for a discussion of the recent surge in permit applications.

166. 461 U.S. 190 (1983).

Energy Act (the “1954 Act”)<sup>167</sup> and the Cooperation with States Amendment (the “1959 Amendment”).<sup>168</sup> Many lower courts improperly apply the preemption doctrine to state regulatory efforts in the field of nuclear energy by reading radiological matters and safety too broadly.<sup>169</sup> With the resurgence of the nuclear industry as a potentially viable alternative to fossil fuels in light of global climate change and the adoption of the Energy Policy Act of 2005 (the “2005 Act”)<sup>170</sup> and the Nuclear Power Program 2010 (the “Program”),<sup>171</sup> a clear and uniform interpretation of *Pacific Gas* is even more vital. The potential construction of new nuclear power plants over the next few years<sup>172</sup> means that conflict concerning many aspects of these plants will be the subject of litigation.<sup>173</sup> Congress needs to pass new legislation amending the 1954 Act to reaffirm the congressional commitment to power sharing and adopt the *Pacific Gas* “direct and substantial” standard.

My discussion will first examine the text of the federal statutes and their correct interpretation.<sup>174</sup> In light of these statutes, I will next examine the preemption doctrine and how this doctrine, and the method for its application in nuclear matters laid out in *Pacific Gas* has been correctly and incorrectly applied by various state and lower federal courts.<sup>175</sup> Next, I will analyze the “direct and substantial” regulation of radiological and safety matters standard and suggest that it has been applied inconsistently and improperly.<sup>176</sup> Finally, I will provide proposals for clearer congressional regulations in nuclear matters and for recognition of the benefits that a clear power-sharing framework can offer.<sup>177</sup>

#### A. *Statutory Interpretation*

The passage of the 1959 Amendment clarified congressional intent for states to play an active role in the nuclear industry, except in certain limited areas specifically under the control of the federal government.<sup>178</sup> This action favors an inference that Congress intended to allow states a large amount of control.

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167. Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (codified as amended at 42 U.S.C. §§ 2011–2297 (2006)).

168. Cooperation with States, Pub. L. No. 86-373, sec. 1, § 274, 73 Stat. 688 (1959) (codified as amended at 42 U.S.C. § 2021 (2006)).

169. See *supra* Part II.D for a discussion of nuclear matters in lower court cases.

170. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended in scattered sections of 26 U.S.C and 42 U.S.C.).

171. See NEP, *supra* note 49, at 1–6 (discussing viability of nuclear power plants and potential beneficial environmental effects).

172. See *supra* notes 59–64 and accompanying text for a discussion of future nuclear facility sites.

173. See *supra* Parts II.C and II.D for a discussion of conflicts between states and the federal government over nuclear regulation.

174. See *infra* Part III.A for a discussion of interpretation of federal nuclear regulations.

175. See *infra* Part III.B for an analysis of the application of the preemption doctrine in nuclear matters.

176. See *infra* Part III.C for discussion of the “direct and substantial” doctrine and its application to state nuclear regulations.

177. See *infra* Part III.D for policy analysis and proposals.

178. See Atomic Energy Act of 1954, 42 U.S.C. § 2021(a)(3), (b), (c) (2006) (detailing power-sharing framework between state and federal governments).



The key issue in this power-sharing framework is what exactly Congress intended to cede to the states. Looking at the 1959 Amendment, Congress specified that the federal government, unless entering into an agreement with a state, controls “construction and operation”; export or import of nuclear material into the United States; disposal of nuclear material into the sea; and disposal of other nuclear material, which, because of potential hazards, requires a license for disposal.<sup>179</sup> Many of these provisions are so general that, if read too broadly, they could defeat the congressional purpose of a power-sharing framework. For example, construction and operation of a plant can encompass *everything* having to do with *all* areas of the nuclear industry.<sup>180</sup> Unless Congress intended these provisions to be read with their plain meaning such that construction refers to the building of the plant and operation refers to the step-by-step process of converting fissile material into energy and waste, the statute is self-contradictory and cannot meet its goals. Congress must have intended for these provisions to be read narrowly, as the Court in *Pacific Gas* noted,<sup>181</sup> so that states could continue to regulate in their traditional areas without fear of preemption.

Subsections (b)<sup>182</sup> and (c)<sup>183</sup> of the 1959 Amendment reflect upon the real meaning of subsection (k).<sup>184</sup> Subsection (k) states that “[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.”<sup>185</sup> Read in conjunction with a narrow interpretation of subsection (c), the intent of Congress in these provisions seems to provide considerable power to the states.

Additionally, the NRC’s ability to enter into agreements with the states furthers the notion that congressional intent favors giving states significant power to regulate the nuclear industry.<sup>186</sup> Under subsection (b) of the 1959 Amendment, the federal government and the states can enter into agreements that grant states the authority to control nuclear byproduct and waste materials.<sup>187</sup> Congress knew that states would eventually have the means to handle these matters as their technologies and sophistication expanded.<sup>188</sup> Disposal of byproducts may be the most crucial factor in the nuclear industry,<sup>189</sup> yet Congress passed legislation allowing states to control these

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179. *Id.* § 2021(c).

180. *See, e.g.,* N. States Power Co. v. Minnesota, 447 F.2d 1143 (8th Cir. 1971), *aff’d mem.*, 405 U.S. 1035 (1972) (adopting broad understanding of federal power in nuclear issues).

181. *See* Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n, 461 U.S. 190, 216 (1983) (calling for federal power to be narrowly construed).

182. *See supra* notes 27–28 and accompanying text for discussion of subsection (b).

183. *See supra* notes 27, 29–31 and accompanying text for discussion of subsection (c).

184. *See supra* notes 32–33 and accompanying text for further discussion of subsection (k).

185. Atomic Energy Act of 1954, 42 U.S.C. § 2021(k) (2006).

186. *See supra* notes 27–28 and accompanying text for a discussion of state agreements with the AEC, NRC’s predecessor, to handle certain radiological materials.

187. 42 U.S.C. § 2021(b).

188. *See* Frampton, *supra* note 18, at 7–52 (discussing potential for state involvement in nuclear affairs).

189. *See* NEP, *supra* note 49, at 1–7 (discussing important consideration of disposal of high- and low-level radioactive waste).

materials.<sup>190</sup> This furthers the notion that Congress contemplated a power-sharing framework.

*B. The Preemption Framework*

The traditional preemption framework itself suggests that state regulation of nuclear issues is permissible. While the doctrine of *Pacific Gas*,<sup>191</sup> other Supreme Court cases,<sup>192</sup> and legislative intent lay out a method to allow both the federal government and the states to handle nuclear matters, this method insufficiently guides state and lower federal courts faced with preemption issues. As a result, these courts are routinely misapplying the preemption doctrine to prohibit state regulation of nuclear matters.<sup>193</sup>

Where Congress is explicit, the first preemption method<sup>194</sup> applies and federal law indisputably preempts.<sup>195</sup> However, the second method for determining whether federal law should preempt state law is murkier. Where Congress does not explicitly indicate an intent to preempt, federal law will preempt state law if a congressional intent to preempt can be found in “a ‘scheme of federal regulation... so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it.’”<sup>196</sup> The 1954 Act and subsequent 1959 Amendment do lay out a large number of specific provisions concerning the regulation of the nuclear industry.<sup>197</sup> These provisions amount to federal authority to regulate everything from radiological matters<sup>198</sup> to scholarship and fellowship plans to study nuclear engineering.<sup>199</sup> However, as the court in *Pacific Gas* acknowledged, “[s]tates retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost, and other related state concerns.”<sup>200</sup> Therefore, the *Pacific Gas* Court found that there was

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190. See 42 U.S.C. § 2021(b) (authorizing agreements with states to discontinue regulatory authority of Commission regarding byproduct, source, and special nuclear materials).

191. See *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 206–07 (1983) (giving federal government exclusive control over safety and radiological areas of nuclear regulation and states power to legislate in nonradiological areas).

192. See generally *English v. Gen. Elec. Co.*, 496 U.S. 72 (1990) (finding that injured employee’s claim of intentional infliction of emotional distress at nuclear facility was not preempted by federal common or statutory law); *Goodyear Atomic Corp. v. Miller*, 486 U.S. 174 (1988) (allowing additional workers’ compensation award authorized by state law for injury sustained at nuclear facility); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984) (determining that state remedies awarded to individuals injured by nuclear power accidents were not preempted by federal law).

193. See *supra* notes 69–73 and accompanying text for a discussion of preemption and the methods courts use to determine if preemption is proper.

194. See *supra* note 70 and accompanying text for a discussion of the first test for preemption.

195. See *Pac. Gas*, 461 U.S. at 203 (discussing first test for preemption).

196. *Id.* at 203–04 (quoting *Fid. Sav. & Loan Ass’n v. de la Cuesta*, 458 U.S. 141, 153 (1982)).

197. See *supra* notes 15–18, 23–42, and accompanying text for a discussion of specific provisions of the 1954 Act and 1959 Amendment.

198. See 42 U.S.C. § 2011 (2006) (declaring policy to regulate radiological matters).

199. See *id.* § 2015(b) (naming provisions for education programs).

200. *Pac. Gas*, 461 U.S. at 205.

room to supplement the federal nuclear regulations.<sup>201</sup> Accordingly, in nuclear matters, federal law does not *always* preempt under the second method.<sup>202</sup>

Many lower courts have not acknowledged the traditional responsibility of the states in their own preemption analysis and, accordingly, run afoul of Supreme Court precedent. The district court in *Northern States Power Co. v. Prairie Island Mdewakanton Sioux Indian Community*<sup>203</sup> ignored the *Pacific Gas* standard when it failed to recognize the inherent powers that the states have to regulate nuclear matters, and referred only to the limited powers that the states had received from Congress.<sup>204</sup> While the district court correctly found that some of the matters the state sought to regulate should have been preempted, such as transportation and waste, others clearly fall under the powers of the state as defined under *Pacific Gas*, such as requiring an impact study and reimbursement expenses, since they do not necessarily deal with radiological or safety matters.<sup>205</sup>

When it comes to the regulation of nuclear matters, state law is entitled to a presumption of permissibility.<sup>206</sup> A court should not expect state law to be preempted in this area, unless the state legislation concerns an area that Congress left no more room to govern, such as safety.<sup>207</sup> The Supreme Court in *Silkwood v. Kerr-McGee Corp.*<sup>208</sup> emphasized the point that Congress expected tension between state and federal law.<sup>209</sup> Accordingly, this tension implies coexistence.

This understanding of preemption in nuclear matters gives the advantage to the states. The state court in *Kansas Gas & Electric Co. v. State Corp. Commission*<sup>210</sup> recognized this advantage and other courts should do the same.<sup>211</sup> In that case, when electric companies sought to raise rates, the state refused to allow the increase completely.<sup>212</sup> In the ensuing litigation, the state court found that Kansas had acted within its power.<sup>213</sup> Consistent with *Pacific Gas*, the court stated that courts needed to defer to the traditional responsibility that states hold rather than hastily determining that

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201. *Id.*

202. *See id.* (observing that states retain responsibility for some nuclear regulation).

203. 781 F. Supp. 612 (D. Minn. 1991), *aff'd*, 991 F.2d 458 (8th Cir. 1993).

204. *Prairie Island*, 781 F. Supp. at 618.

205. *See id.* at 614 (detailing different areas states tried to regulate).

206. *See Pac. Gas*, 461 U.S. at 206 (discussing states holding on to traditional power to regulate energy industry, despite federal legislation).

207. *See id.* (stating courts should start with assumption that traditional powers of states are not superseded).

208. 464 U.S. 238 (1984).

209. *Silkwood*, 464 U.S. at 256. In that case, the Court allowed a grant of damages under tort law because state law was consistent with the objectives of Congress: compliance with the law did not make compliance with any federal regulation impossible or frustrate the objectives of Congress. *Id.* at 238, 257–58; *see also* Goxem, *supra* note 101, at 427 (discussing Supreme Court's desire to allow states more involvement in nuclear regulation, even if there may be conflict between federal and state provisions, particularly regarding safety issues).

210. 720 P.2d 1063 (Kan. 1986).

211. *Kan. Gas*, 720 P.2d at 1087.

212. *Id.* at 1067.

213. *Id.* at 1087.

the state law interfered with an objective of Congress.<sup>214</sup> The Kansas court was correct in that many courts are too quick to defer to the federal law in nuclear regulation matters, despite the fact that there is still room under the 1954 Act and 1959 Amendment for states to legislate.

Under the third method for determining preemption, federal law preempts state law if “compliance with both . . . is a physical impossibility” or if the state law interferes with the “objectives of Congress.”<sup>215</sup> While state law has interfered with the promotion of the nuclear industry on occasion, particularly in matters where states sought to block nuclear power because it was unpopular,<sup>216</sup> most state matters do not interfere with the objectives of Congress (as will be discussed below), but rather comply with and build on these objectives. Therefore, the third method for determining preemption is not as much a concern following the discussion of congressional intent. In the context of nuclear regulation, states can legislate in many matters in which impossibility of federal compliance will not result.<sup>217</sup> Further, the objectives of Congress are that the states should have a say in regulating matters in which states are normally involved.<sup>218</sup> Therefore, the third test is passed and no preemption can be found.

Under a preemption analysis, most legislation passed by the states with proper motive should be valid. Courts should not attempt to stretch the doctrine of preemption to cover issues that congressional intent and binding Supreme Court decisions state are within the realm of state power. Increased findings of preemption can slow the whole process of construction of new nuclear facilities. Further, if preemption is applied randomly and without a set formula, private investment in nuclear plants will decline because of the instability and unpredictable costs.

### C. *Problems with the Current Framework*

The direct and substantial approach<sup>219</sup> of *Pacific Gas* and the cases that have closely followed its precedent was the correct interpretation of the congressional intention embodied in the 1954 Act and the 1959 Amendment. However, state and lower federal courts have misinterpreted this precedent and unnecessarily taken power from the states.

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214. *Id.*

215. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 204 (1983) (citations omitted) (internal quotation marks omitted).

216. For an interesting battle between nuclear opponents and utilities, see the many cases involving Suffolk County, New York and the Shoreham Nuclear Power Plant. The plant was incredibly unpopular, particularly following Three Mile Island, which led to protests and litigation against the plant. *See generally* *County of Suffolk v. Long Island Lighting Co.*, 728 F.2d 52 (2d Cir. 1984); *Citizens for an Orderly Energy Policy, Inc. v. County of Suffolk*, 604 F. Supp. 1084 (E.D.N.Y. 1985).

217. *See Pac. Gas*, 461 U.S. at 221–23 (finding states free to regulate traditional areas of responsibility if they do not interfere with radiological or safety matters).

218. *See id.* at 212 (discussing congressional intent to allow state control over traditional matters).

219. The phrase “direct and substantial” appears in *English v. General Electric Co.* 496 U.S. 72, 85 (1990). However, the standard is similar to that of *Pacific Gas*. *See* 461 U.S. at 212 (stating that courts should construe federal law narrowly to allow state regulation of traditional matters, unless it specifically deals with radiological or safety matters).

### 1. Radiological Matters

Several lower court cases have ignored congressional intent, too readily applied preemption, and, therefore, reached erroneous results when considering state regulation of nuclear matters. For example, in *Missouri v. Westinghouse Electric, LLC*,<sup>220</sup> the district court found an agreement between a state and a utility preempted merely because the site in question was contaminated.<sup>221</sup> In that case, the state sought reimbursement for studies of the effect of decommissioning on the environment and surrounding area.<sup>222</sup> Clearly, this request by the state has some effect on radiological matters and safety concerns. However, decontamination of a site undoubtedly will have many effects on several matters of state concern. While the state could not have directly regulated the radiologically contaminated material, per *Pacific Gas*, reimbursement for the costs of a study to determine the effects of contamination concerned a legitimate state interest relating to the economics of dealing with the site and anticipated environmental effects.<sup>223</sup> The courts too easily found state laws that concern core state interests such as the environment, local economy, and property preempted.

Although the 1959 Amendment prohibits states from directly regulating radiological materials, the key question becomes what exactly is a nonradiological matter. Although the question can be a close call, given latent vagueness in the statutory language<sup>224</sup> and the Supreme Court's holding in *Pacific Gas*,<sup>225</sup> the courts should construe "radiological matters" as narrowly as possible to maximize state regulatory power in the nuclear field. For example, in *Nevada v. Watkins*,<sup>226</sup> the court reached an improper result because it extended the definition of radiological matters too far, going beyond the standard laid down in *Pacific Gas*.<sup>227</sup> The state claimed that the legislation banning the storage of nuclear waste at Yucca Mountain was based on economic concerns.<sup>228</sup> However, the court in that case found that the state's intention in banning the importation of all waste without discretion was also based on concerns regarding the safety of radiological waste storage at the site.<sup>229</sup> The state supported its case by claiming that studies had found the site to be unsuitable.<sup>230</sup> However, the court ruled that the total ban on radioactive waste disposal was preempted, as it had a direct and substantial effect on radiological matters.<sup>231</sup>

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220. 487 F. Supp. 2d 1076 (E.D. Mo. 2007).

221. *Westinghouse Elec.*, 487 F. Supp. 2d at 1085–86.

222. *Id.* at 1079.

223. See Sara Zdeb, Note, *From Georgia v. Tennessee Copper to Massachusetts v. EPA: Parens Patriae Standing for State Global-Warming Plaintiffs*, 96 GEO. L.J. 1059, 1070–73 (2008) (discussing environment as legitimate state interest).

224. See *supra* notes 23–42, 178–90, and accompanying text for a discussion of the 1959 Amendment.

225. See *supra* notes 83–100 and accompanying text for analysis of *Pacific Gas*.

226. 914 F.2d 1545 (9th Cir. 1990).

227. See *supra* notes 85–100 and accompanying text for a discussion of the *Pacific Gas* standard.

228. *Watkins*, 914 F.2d at 1551.

229. *Id.* at 1561.

230. *Id.*

231. *Id.*

Where a state attempts to regulate radiological waste disposal *solely* based upon state concerns about the potential *radiological* dangers, the state action impedes upon federal authority and courts are correct to strike the regulations. In fact, many states have passed such legislation, and, with regularity, courts have found preemption.<sup>232</sup> Such a state action was struck down in *United States v. Manning*,<sup>233</sup> where a Washington State ballot question required the cleanup of a radioactively contaminated site before the addition of new waste.<sup>234</sup> Significantly, the ballot question specifically mentioned that the proposed regulation's purpose was to regulate radioactive materials.<sup>235</sup> Despite the existence of nonradioactive waste at the site, the purpose of the ballot question was an attempt by the state to exert direct and substantial control over an area of nuclear regulation—waste disposal—that the 1959 Amendment delegated solely to the federal government.<sup>236</sup> Since the state did not have a legitimate nonradiological purpose, the court's finding of preemption was likely proper.

However, if a state has a legitimate purpose for passing legislation that affects the development of nuclear facilities or regulates these facilities in any way, preemption should not be automatic. A state should be free to regulate the nuclear industry if the regulation is actually based on concerns involving the environment, economic matters, zoning, land use, etc. with only incidental effect on radiological matters, because this type of regulation falls under state authority.<sup>237</sup> In *Maine Yankee Atomic Power Co. v. Bonsey*,<sup>238</sup> for example, the district court correctly followed *Pacific Gas* by stating that deference must be given to the states when they assert a reason other than radiological matters or safety.<sup>239</sup> The state in that case prohibited the construction and operation of plants that would have a substantial effect on the environment.<sup>240</sup> Just based on this brief description, the state law seems to impede on a stated power of the federal government. However, the court deferred to the state's explanation that it was only attempting to manage site development in connection with the nonradiological aspects of plant development.<sup>241</sup> The state did not specifically regulate a radiological or safety issue.<sup>242</sup> The effect was only incidental, and, therefore, regulation was permissible.<sup>243</sup>

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232. See, e.g., *Illinois v. Gen. Elec. Co.*, 683 F.2d 206, 215 (7th Cir. 1982) (striking down state regulation of storage and transportation of spent nuclear fuel); *N. States Power Co. v. Prairie Island Mdewakanton Sioux Indian Cmty.*, 781 F. Supp. 612, 618 (D. Minn. 1991) (striking down ordinance forbidding transport of waste across tribal land).

233. 527 F.3d 828 (9th Cir. 2008).

234. *Manning*, 527 F.3d at 831.

235. *Id.* at 833.

236. *Id.*

237. See *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983) (discussing traditional areas of state power in energy).

238. 107 F. Supp. 2d 47 (D. Me. 2000).

239. *Me. Yankee*, 107 F. Supp. 2d at 54.

240. *Id.* at 49.

241. *Id.* at 55–56.

242. *Id.* at 54.

243. *Id.* at 55–56.

## 2. Safety

Another important issue concerns legislation aimed at safety issues. While federal legislation never specifically mentions safety as an area over which the federal government has sole control,<sup>244</sup> courts have properly determined that the federal government retains complete control over safety issues, along with the aforementioned radiological issues.<sup>245</sup> The Court in *Pacific Gas* affirmed federal authority over safety issues as part of the regulatory intent of Congress in enacting the 1959 Amendment.<sup>246</sup> The provisions of subsection (c) of the 1959 Amendment do have inherent safety concerns intertwined in the language.<sup>247</sup> It seems that the major reason Congress laid out these particular powers was concern over inherent and serious safety problems. Without a single authority to regulate disposal of such dangerous waste, delays or confusion could be disastrous. As a matter of necessity, federal law must preempt. The direct and substantial standard<sup>248</sup> advocated in *Pacific Gas* is the critical tool with which to discern the permissible from the preempted state regulation.<sup>249</sup> It gives deference to the states where Congress intended, yet gives courts the power to overturn legislation that impermissibly frustrates the federal scheme.

As long as the state's legislation does not affect radiological safety, however, courts should uphold environmental legislation as valid. Unfortunately, as seen in *Brown v. Kerr-McGee Chemical Corp.*,<sup>250</sup> the line between environmental protection and safety issues is often blurry both legally and physically.<sup>251</sup> For example, where radiological waste products mix with nonradiological waste, there is not much that a state can do to dispose of the waste without encroaching on the federal government's control over radiological matters.<sup>252</sup> However, control over nonradiological waste,<sup>253</sup> concerns about nonradiological effects on land,<sup>254</sup> and state requirements of environmental permits<sup>255</sup> do not always have that direct and substantial effect on radiological or safety issues that merit automatic preemption. Accordingly, courts

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244. See 42 U.S.C. §§ 2011, 2210 (2006) (failing to mention safety as area explicitly and monopolistically governed by federal government).

245. See, e.g., *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212–13 (1983) (regarding safety as area over which federal government holds complete control).

246. See *id.* (discussing link between safety and powers under 1959 Amendment).

247. See 42 U.S.C. § 2021(c) (listing powers held by Congress, such as disposal of radioactive waste).

248. See *supra* notes 122–26 and accompanying text for an explanation of the direct and substantial standard.

249. See *English v. Gen. Elec. Co.*, 496 U.S. 72, 85 (1990) (clarifying necessity of direct and substantial effect).

250. 767 F.2d 1234 (7th Cir. 1985).

251. See, e.g., *Brown*, 767 F.2d at 1241 (discussing blurry area between pollution controls and environmental laws).

252. *Id.* at 1242–43.

253. See *id.* at 1241 (discussing exceptions to preemption); *Me. Yankee Atomic Power Co. v. Bonsey*, 107 F. Supp. 2d 47, 54 (D. Me. 2000) (discussing nonradiological areas that can properly be regulated by states).

254. See *Kerr-McGee Chem. Corp. v. City of West Chicago*, 914 F.2d 820, 826 (7th Cir. 1990) (discussing ability of state to regulate nonradiological waste contamination).

255. See *People ex rel. Hartigan v. Kerr-McGee Chem. Corp.*, 568 N.E.2d 921, 926 (Ill. App. Ct. 1991) (holding that state environmental permit requirement was not preempted).

should give a higher level of deference to states in matters of environmental concern under the *Pacific Gas* standard.<sup>256</sup> While there is much federal regulation of environmental concerns,<sup>257</sup> no specific legislation prevents states from regulating environmental concerns arising from nuclear energy. Environmental legislation, unless it deals with radiological safety, should not be preempted because Congress has not specifically delegated this power to the federal government and the default permits state regulatory authority.<sup>258</sup> Further, attempting to protect a location from the potentially negative effects of a new power plant is a legitimate state concern regardless of the type of plant.<sup>259</sup>

Alternatively, the only clear way to tell if a state is regulating a safety issue is where that purpose is specifically stated. In this instance, whether a state's goals are legitimate will be up to the courts to determine based on the state legislature's intentions and whether the legislation will have a direct and substantial effect on safety issues with no other legitimate purpose.<sup>260</sup> As the Supreme Court reemphasized in *English*, Congress never intended to block all state regulation in the nuclear field.<sup>261</sup> The direct and substantial standard<sup>262</sup> allows courts to review the purpose of legislation to ensure that, in practice, the law will not impermissibly encroach on federal exclusive authority notwithstanding the state legislature's stated purpose.

Almost every aspect of state regulation can influence some safety concern; so, to read the scope of safety so broadly actually thwarts the intentions of Congress.<sup>263</sup> Therefore, even if state law has some incidental effect on safety, federal law should not preempt if the state has a legitimate purpose unrelated to safety.<sup>264</sup> While the *Northern California Ass'n to Preserve Bodega Head & Harbor v. Public Utilities Commission*<sup>265</sup> decision predates *Pacific Gas*, it still provides an excellent explanation of the complexity of the issue. In *Bodega Head*, the development of a nuclear facility on an

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256. See *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205–06 (1983) (articulating standard).

257. See generally U.S. Environmental Protection Agency, Laws & Regulations, <http://www.epa.gov/lawsregs/> (last visited Mar. 29, 2010).

258. See *supra* notes 15–18, 23–42, and accompanying text for a discussion of the powers that the 1954 Act and 1959 Amendment retain for the federal government.

259. See *Pac. Gas*, 461 U.S. at 222–23 (discussing use of state power to slow nuclear development if there is legitimate reason for doing so).

260. See *English v. Gen. Elec. Co.*, 496 U.S. 72, 85 (1990) (requiring direct and substantial effect on radiological matters); *Pac. Gas*, 461 U.S. at 216 (stating that it should be up to Congress to determine if state has misused power). See *supra* notes 36–42 and accompanying text for a discussion of congressional intent that courts should decide if states are capable of regulating specific nuclear issues.

261. *English*, 496 U.S. at 83–84.

262. See *supra* notes 122–26 and accompanying text for an explanation of the direct and substantial standard.

263. See, e.g., *Kerr-McGee Chem. Corp. v. City of West Chicago*, 914 F.2d 820, 826 (7th Cir. 1990) (concerning city's demand that utility comply with erosion and sediment regulations, which could have effect on safety at waste disposal site).

264. See *Pac. Gas*, 461 U.S. at 213–16 (allowing state law halting facility construction without comprehensive waste disposal plan, despite risk of safety implications).

265. 390 P.2d 200 (Cal. 1964).



earthquake fault clearly implicated radiological and safety issues.<sup>266</sup> However, the court made the point that the location of the plant made consideration of safety issues essential.<sup>267</sup> These safety issues were not solely radiological because of the variety of effects earthquake damage can have on a nuclear facility; therefore, regulation would be permissible under the *Pacific Gas* interpretation.<sup>268</sup>

While the federal government alone can regulate matters concerning radiological and safety issues, these issues should be narrowly construed. If not, they would overwhelm the ability of states to pass any legislation because, in the nuclear industry, the scope of “radiological” and “safety” can theoretically apply to almost anything. As with radiological issues, the *Pacific Gas* direct and substantial standard requires a narrow construction of the definition of “safety,” so as not to impede on a state’s traditional authority to regulate energy in a manner consistent with congressional intent.<sup>269</sup>

#### D. *Proposals for Clarification*

With the passage of the 2005 Act<sup>270</sup> and the proliferation of the Program,<sup>271</sup> the federal government has taken an important step forward in providing a stable structure for developing nuclear power. The government has taken a big step, not only towards providing a diversified energy policy and a means to combat global warming, but also in laying out a clearer path over the legal hurdles that have impeded construction of new nuclear facilities in the United States. A clear legal path for utility companies and states to follow will help to control the huge licensing and construction costs.<sup>272</sup> While the specifics of this legislation are beyond the scope of this Comment, the concepts below should act as a guide.

Nuclear energy, often conceived of negatively due to its connection with nuclear weapons, is a viable fuel source for the future.<sup>273</sup> Nuclear power has become a viable source of energy in many other countries.<sup>274</sup> Currently, nuclear power provides

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266. See *Bodega Head*, 390 P.2d at 204 (discussing safety implications of building nuclear facility near earthquake fault).

267. *Id.*

268. *Id.* Plant location is an important consideration for a state because of economic, zoning, and environmental concerns. If a utility sought to place a facility on a low-lying Florida Key directly in the expected path of many major hurricanes, a state would have to address many of those concerns.

269. See *Pac. Gas*, 461 U.S. at 211–12 (observing congressional intent to preserve state authority over safety matters).

270. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended in scattered sections of 26 U.S.C and 42 U.S.C.).

271. U.S. Dep’t of Energy, *supra* note 46.

272. See Frye, *supra* note 47, at 318–19 (discussing high costs).

273. See *supra* notes 51–55 and accompanying text for a discussion of the viability of the nuclear industry as described under Nuclear Power Program 2010. See also NEI, Key Issues: Need for New Nuclear Plants, <http://www.nei.org/keyissues/newnuclearplants/needfornewnuclearplants/> (last visited Jan. 20, 2010) (describing positive effect nuclear power can have on air pollution, demand for increased energy, and energy price stability).

274. See Larry Rohter, *2 Endorsements of Nuclear Power, but Sharp Differences on Details*, N.Y. TIMES, Oct. 10, 2008, at A25 (explaining that France generates nearly eighty percent of its electricity through nuclear power).

approximately twenty percent of the energy in the United States, but there is much potential for growth.<sup>275</sup> Enough fissile material exists to power nuclear plants for potentially thousands of years.<sup>276</sup> Providing a clear and stable body of law will help reduce costs for all parties involved and, therefore, encourage development.

The passage of the 2005 Act and the Program were important, but Congress needs to go further so states and courts understand their role. Congress should attempt to clarify the states' role by passing a new amendment. Congress could make clear in this amendment that through the 1959 Amendment it sought major state involvement in nonradiological and nonsafety matters. Therefore, Congress should pass legislation to clarify that nonradiological and nonsafety matters are to be left to the states unless there is evidence that a state is only impeding construction without a legitimate purpose.

Congress has allowed states to remain involved in the industry for more than fifty years and in that time states have proven capable of successfully managing the industry through agreements with the NRC.<sup>277</sup> The power-sharing framework is not what killed the nuclear industry before. That death was caused by terrible public relations management regarding fears of nuclear accidents, actual failure to establish a sensible waste disposal policy, an inefficient licensing and approval process, and skyrocketing costs that pushed nuclear power to the backburner until crises in fossil fuel production and the slow development of wind and solar energy emerged.<sup>278</sup> Therefore, reaffirming the power-sharing arrangement would not harm the reemergence of the nuclear industry.

A clear legal framework with states involved as the primary actors is essential to a successful nuclear industry. If a utility has to deal with both state and federal governments without knowing whose say is final, more confusion and inefficiency will result, which may hinder private investment.<sup>279</sup> Being a leading force in both protecting the environment and lowering energy prices would obviously make any politician excited.<sup>280</sup> While an antinuclear stance may have been popular from the 1970s to the

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275. Matthew L. Wald, *Slow Start for Revival of Reactors*, N.Y. TIMES, Aug. 22, 2006, at C1.

276. See Toni Johnson, Council on Foreign Relations, *Global Uranium Supply and Demand*, <http://www.cfr.org/publication/14705/> (last visited Jan. 20, 2010) (stating that at current usage, uranium supplies will last approximately seventy years, but new and efficient reactors and use of reprocessed fuel can extend supply for more than two thousand years).

277. See *supra* notes 27–28, 182–90, and accompanying text for information regarding the high number of states that have agreements with the federal government over certain matters under the federal government's control, per the 1959 Amendment. Currently, thirty-seven states have entered into agreements to handle different radiological and safety aspects that would be beyond their power under the 1959 Amendment. NRC, NRC: FSME—State Regulations and Legislation, <http://nrc-stp.ornl.gov/rulemaking.html#PA> (last visited Jan. 20, 2010).

278. See Frye, *supra* note 47, at 318 (discussing factors that led to downfall of U.S. nuclear industry at end of twentieth century).

279. See *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 201 (1983) (discussing inefficiency that can negatively affect nuclear industry because of prolonged legal battles).

280. See *generally* Rohter, *supra* note 274 (detailing support for expanded use of nuclear industry by President Barack Obama and former presidential candidate Senator John McCain).

1990s,<sup>281</sup> today this is no longer the case.<sup>282</sup> Many states have embraced nuclear energy and have raced to be the first to get license approval and begin plant construction.<sup>283</sup>

#### IV. CONCLUSION

The recognition of the serious problem of global climate change, the unpredictability of world energy prices, and a gradual softening of public opinion have led to a resurging nuclear power industry in the new millennium.<sup>284</sup> Because of these developments, a clear interpretation of the preemption standard used to determine the validity of state nuclear regulation is necessary.

Congress should amend the laws governing the nuclear industry to lay out a clear framework for the federal government and state governments to follow in regulating the industry.<sup>285</sup> Further, in interpreting current laws, courts should correctly apply the *Pacific Gas* standard, whereby states have the power to regulate those matters not specifically under the control of the federal government and issues not directly and substantially affecting radiological or safety matters.<sup>286</sup> A clear understanding of the law, construed narrowly and without the presumption that a matter is radiological or safety related, will likely lead to less litigation and will encourage the development of the nuclear industry.

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281. See Frye, *supra* note 47, at 318 (discussing era of decline in nuclear industry). For a comedic take on the unpopularity of the nuclear industry, see *The Simpsons: Two Cars in Every Garage and Three Eyes on Every Fish* (Fox television broadcast Nov. 1, 1990) (transcript available at [www.simpsoncrazy.com/scripts/two-cars](http://www.simpsoncrazy.com/scripts/two-cars)), in which the discovery of a three-eyed fish leads to harsh scrutiny of Mr. Burns's nuclear power plant.

282. See Roland M. Frye, Jr., *The Current "Nuclear Renaissance" in the United States, Its Underlying Reasons, and Its Potential Pitfalls*, 29 ENERGY L.J. 279, 282–87 (2008) (discussing significant increase in public support for nuclear energy).

283. See *supra* notes 59–64 and accompanying text for a discussion of the recent rapid growth in license applications.

284. See Frye, *supra* note 282, at 282–87 (mentioning factors leading to resurgent nuclear industry).

285. See *supra* Part III.D for a discussion of a revision of federal nuclear regulation.

286. See *supra* notes 83–100, 191–218, and accompanying text for a discussion of the interpretation of *Pacific Gas*.

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