# *Pacific Gas & Electric* Revisited: Federal Preemption of State Nuclear Moratoria

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## Introduction

Current concerns with climate change have led the United States to seriously examine its energy portfolio and evaluate how to meet rising energy demand while at the same time addressing concerns with carbon emitting sources of energy. Even with the recent advances in renewable energy sources, such as solar and wind power, today's energy landscape remains coal-dominated.[1] Coal power plants produce roughly 3.7 million tons of carbon dioxide a year,[2] greatly adding to the impacts of climate change. Nearly fifty percent of domestic energy comes from coal.[3] Today, the science behind climate change is widely accepted, leading to a major reconsideration of non-carbon emitting sources of energy, including nuclear energy.[4] While the capital costs for nuclear energy remain high, proponents point to its carbon-free electricity generation and low production costs.[5]

Nuclear energy[6] was once heralded as the savior of all domestic energy issues,[7] but the nuclear industry slowed in the 1970s and 1980s due to rising economic costs, extreme delays, regulatory changes, and pressure from interest groups.[8] The proverbial breaking point for the nuclear industry occurred in 1979 with the partial meltdown of Unit 2 at the Three Mile Island Nuclear Generating Station.[9] While resulting in no direct fatalities, the incident sent a shock wave of fear throughout the United States regarding the dangers of nuclear power.[10] As a result, there have been no purchase orders for new nuclear power plants since 1974.[11] Countries around the world, however, have continued to develop and expand their use of nuclear power. France, for example, derives over seventy-five percent of its electricity from nuclear generation.[12]

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1. *Electric Power Annual, Electric Power Industry 2008: Year in Review*, U.S. Energy Info. Admin., Indep. Statistics & Analysis (January 21, 2010), http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html. The percentage of net electricity generated from coal is 48.2%. Nuclear generating stations comprise 19.6%.
2. *Environmental Impacts of Coal Power: Air Pollution*, Union of Concerned Scientists, http://www.ucsusa.org/clean_energy/coalvswind/c02c.html (last visited Nov. 13, 2010).
3. *Electric Power Annual*, *supra* note 1.
4. 156 Cong. Rec. H414, H416 (daily ed. Jan. 27, 2010) (Pres. Obama State of the Union Address); *Bush Urges More Refineries, Nuclear Plants*, Cnn.com (Apr. 28, 2010), http://www.cnn.com/2005/POLITICS/04/27/bush.energy/.
5. *The Economics of Nuclear Power*, World Nuclear Ass'n (July 2010), http://www.world-nuclear.org/info/inf02.html; *see also Electric Energy Annual*, *supra* note 1.
6. "Nuclear energy" refers to electricity generated through uranium fission. The realization of nuclear energy as a viable energy option followed the catastrophic destruction of the atomic bombs in World War II. *See generally* Harry Henderson, Nuclear Power: A Reference Handbook 6–7, 33 (2000); U.S. Dept. of Energy, Office of Nuclear Energy, Sci. & Tech., The History of Nuclear Energy 8–9 (2006), *available at* http://www.ne.doe.gov/pdfFiles/History.pdf. For instance, following the war, President Dwight D. Eisenhower offered the technology behind nuclear energy to the world and proclaimed that "[t]he United States knows that peaceful power from atomic energy is no dream of the future. That capability, already proved, is here—now—today." President Dwight D. Eisenhower, Atoms for Peace (Dec. 8, 1953), *available at* http://www.eisenhower.archives.gov/research/digital_documents/Atoms_For_Peace/New%20PDFs/Binder13.pdf. Additionally, Congress enacted the Atomic Energy Act of 1954 ("AEA") to promote the development of commercial nuclear power within the United States. Atomic Energy Act of 1954, 42 U.S.C. § 2011(a) (2006). This led to a period of wide support for nuclear energy and extensive growth through the 1950s and 1960s. *See generally* Henderson, *supra*, at 14–16.
7. Henderson, *supra* note 6, at 5–7. There are currently sixty-five nuclear power plants with 104 reactors in the United States. *Introduction to Nuclear*, U.S. Energy Info. Admin., http://www.eia.doe.gov/cneaf/nuclear/page/nuc_reactors/reactsum.html (last visited Nov. 13, 2010).
8. Robert Gottlieb, Forcing the Spring: The Transformation of the American Environmental Movement 235–43 (2005). Groups that would later oppose all facets of the nuclear industry, such as the Sierra Club, were once advocates of nuclear power and "praised [it] as a clean energy source," becoming "one of the strongest advocates for building the Diablo Canyon nuclear plant in California." Henderson, *supra* note 6, at 7; Deb Kumar Bose, *Decline of Nuclear Power*, 35 Econ. & Pol. Wkly. 2011 (2000).
9. Henderson, *supra* note 6, at 25.
10. *Id.*
11. *Id.*
12. *Nuclear Power in France*, World Nuclear Ass'n, http://www.world-nuclear.org/info/inf40.html (last visited Nov. 13, 2010); Henderson, *supra* note 6, at

The Bush administration supported a "nuclear renaissance" in the United States[13] and the Obama administration has continued this support, recently designating $40 million towards the development of Next Generation Nuclear Plants and announcing loan guarantees for the construction of new nuclear plants in Georgia.[14]

A major obstacle to new nuclear power plants in the United States exists in the form of state moratoria placed on new nuclear builds. These moratoria, enacted by state legislatures, prohibit any energy utility from constructing a nuclear power plant until certain conditions have been met.[15] In most states the condition is based on the federal government's demonstration of a permanent solution to the nuclear waste issue.[16] The Supreme Court upheld these moratoria in *Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission* ("*PG&E*").[17] Although the federal government has proposed the Yucca Mountain geologic repository as a solution to the waste issue, ongoing litigation,[18] compounded by the current Administration's attempt to withdraw its license application from the Nuclear Regulatory Commission ("NRC"),[19] raises further doubts that the government will produce a timely, permanent solution as mandated by the moratoria. Additionally, the NRC Chairman recently directed the NRC staff to stop processing the Yucca Mountain license application.[20] Therefore, on the basis of *PG&E*, certain states are effectively prohibited from reconsidering nuclear energy as an option in combating climate change and meeting their energy needs.

This Note argues that the Supreme Court erred in *PG&E* by upholding the California moratorium. The Court's rationale that the California law was based on economic considerations overlooked the fact that, as seen through the Nuclear Waste Policy Act[21] ("NWPA"), Congress intended for the NRC to completely occupy the field of nuclear waste regulation. The Court's refusal to examine California's rationale in passing its moratorium effectively allows states to establish a

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13. *See* David E. Sanger, *In Energy Plan, Bush Urges New Drilling, Conservation and Nuclear Power Review*, N.Y. Times, May 17, 2010, http://www.nytimes.com/2001/05/17/us/in-energy-plan-bush-urges-new-drilling-conservation-and-nuclear-power-review.html; Elisabeth Bumiller, *State of the Union: Energy; Bush's Goals on Energy Quickly Find Obstacles*, N.Y. Times, Feb. 2, 2006, http://www.nytimes.com/2006/02/02/politics/02energy.html.

14. Press Release, U.S. Dep't of Energy, Department of Energy Announces $40 Million to Develop the Next Generation Nuclear Plant (Mar. 8, 2010) (on file with author), *available at* http://nuclear.gov/newsroom/2010PRs/nePR030810.html; Press Release, U.S. Dep't of Energy, Obama Administration Announces Loan Guarantees to Construct New Nuclear Power Reactors in Georgia (Feb. 16, 2010) (on file with author), *available at* http://nuclear.gov/newsroom/2010PRs/nePR021610.html.

15. *See* The Keystone Center, Nuclear Power Joint Fact-Finding 74 (2007), *available at* http://keystone.org/files/file/about/publications/FinalReport_NuclearFactFinding6_2007.pdf. Hawaii's Constitution contains a provision that bans the construction of a nuclear power plant unless two-thirds of each house of the legislature approves. Haw. Const. art. XI, § 8. Vermont also maintains that a nuclear power plant may only be built with the approval of the general assembly and a determination that the plant will be for the general welfare. 2006 Vt. Acts & Resolves 204 ("[A] nuclear energy generating plant may be operated in Vermont only with the explicit approval of the General Assembly expressed in law after full, open, and informed public deliberation and discussion with respect to pertinent factors, including the state's need for power, the economics and environmental impacts of long-term storage of nuclear waste . . . ."). Some states have instituted outright bans on the construction of any new nuclear power plants. *See, e.g.* Minn. Stat § 216B.243 (2009) ("The commission may not issue a certificate of need for the construction of a new nuclear-powered electric generating plant.").

16. California, Connecticut, Illinois, Kentucky, Maine, Oregon, West Virginia, and Wisconsin all have similar statutes that bar the construction of new nuclear power plants until the federal government has demonstrated a permanent solution to the issue of nuclear waste. *See* The Keystone Center, *supra* note 15, at 74; *see also* Cal. Pub. Res. Code § 25524.2 (West 2009); Conn. Gen. Stat. § 22a-136 (2008); 220 Ill. Comp. Stat. 5/8-406(c) (2010); Ky. Rev. Stat. Ann. § 278.605 (West 2010); Me. Rev. Stat. Ann. tit. 35, § 4374 (2009); Or. Rev. Stat. § 469.595 (2007); W. Va. Code § 16-27A-1 (2009); Wis. Stat. Ann. § 196.493 (West 2009).

    Ninety five percent of nuclear waste generated is "high-level waste," which is "the material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." U.S. Dep't of Energy, Radioactive Waste Management Manual (1999), *available at* https://www.directives.doe.gov/directives/current-directives/435.1-DManual-1c1/at_download/file; *Radioactive Waste Project*, Nuclear Info. and Res. Serv., http://www.nirs.org/radwaste/radwaste.htm (last visited Nov. 13, 2010). High-level nuclear waste remains hazardous to humans for thousands of years. Controversy surrounds the storage of high level waste due to the length of time the waste must remain sequestered. In the United States, the most well-known proposal for storing high level waste is burial underneath Nevada's Yucca Mountain. *See* Lisa Mascaro, *Obama to Zero Out Yucca Mountain Funding, Pull License*, Las Vegas Sun, Feb. 1, 2010, http://www.lasvegassun.com/news/2010/jan/31/obama-moves-pull-yucca-mountain-license-applicatio.

17. Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n, 461 U.S. 190 (1983).

18. *See, e.g.* Nevada v. Watkins, 914 F.2d 1545 (9th Cir. 1990); United States v. Nevada, No. 2:00-CV-0268-RLH-LRL, 2007 U.S. Dist. LEXIS 69177 (D. Nev. Aug. 31, 2007); Todd Garvey, Cong. Research Serv., Report No. R40996, The Yucca Mountain Litigation: Breach of Contract Under the Nuclear Waste Policy Act of 1982 (Dec. 22, 2009), *available at* http://ncseonline.org/NLE/CRSreports/10Jan/ R40996.pdf.

19. U.S. Dep't of Energy's Motion to Withdraw, In re U.S. Dep't of Energy, ASLBP No. 09-892-HLW-CAB04 (A.S.L.B. May 3, 2010), *available at* http://www.energy.gov/news/documents/DOE_Motion_to_Withdraw.pdf. Under the Nuclear Waste Policy Act ("NWPA"), the federal government is required to develop a permanent repository as a way to deal with the issue of spent nuclear fuel. Nuclear Waste Policy Act of 1982, 42 U.S.C. §§ 10131–10145 (2006). After the administration has developed a site, it is required to submit a license application, or construction authorization, to the Nuclear Regulatory Commission ("NRC") for licensing and approval prior to construction and operation of the repository. *Id.* at § 10134(b). The initial deadline for acceptance of nuclear waste from commercial facilities was 1998, *id.* § 10222(a)(5)(B), and the administration has been in breach of its contractual obligations under the NWPA with these facilities. *See, e.g.*, Me. Yankee Atomic Power Co. v. United States, 225 F.3d 1336, 1343 (Fed. Cir. 2000). The Yucca Mountain license application was submitted to the NRC in June 2008. *DOE's License Application for a High-Level Waste Geologic Repository at Yucca Mountain*, U.S. Nuclear Reg. Comm'n, http://www.nrc.gov/waste/hlw-disposal/yucca-lic-app.html (last visited Nov. 13, 2010). The NRC has three years to review and approve the application. 42 U.S.C. § 10134(d). While the Obama administration attempted to withdraw the application in March 2010, a three member Atomic Safety and Licensing Board Panel denied that request in June, stating that the withdrawal violated separation of powers principles. In re U.S. Dep't of Energy, ASLBP No. 09-892-HLW-CAB04, slip op. at 5 (A.S.L.B. June 29, 2010), *available at* http://graphics8.nytimes.com/packages/pdf/national/20100629-yucca-memo.pdf.

20. Jeff Beattie, *Controversy Grows as Jackzo Halts Key NRC Yucca Review*, Energy Daily 1, Oct. 8, 2010.

21. 42 U.S.C. §§ 10131–10145 (2006).

moratorium by simply stating that their motives are driven by economic concerns.

To correct the problem created by *PG&E,* this Note proposes that: (1) the NRC should issue regulations under the NWPA to clarify that it has exclusive authority to regulate in the field of nuclear waste, thereby barring states from making any waste considerations regarding new nuclear power plants; (2) Congress should amend the NWPA to expressly state that the federal government occupies the field of nuclear waste regulation, thereby leaving no room for states to regulate; and (3) the Court should reverse this precedent on its own, based on evidence that the assumptions upon which the Court relied have turned out to be erroneous and because the NWPA clearly establishes that Congress intended the NRC to have field preemption in the area of nuclear waste, thereby prohibiting states from using waste considerations as conditions for moratoria.

Part I of this Note examines the preemption standard as established by the Constitution and Supreme Court precedent, distinguishing between the different types of preemption granted to the federal government. Part II examines the Atomic Energy Act ("AEA"), the NWPA, preemption case law surrounding both statutes, and the Supreme Court's decision in *PG&E*. Part III discusses three possible solutions to the preemption issues of state moratoria.[22] Part IV provides a summary of the arguments and a conclusion.[23]

## I. Federal Preemption of State Law

The Supremacy Clause in the Constitution of the United States provides that the "Constitution and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land."[24] The Supreme Court has consistently held this provision to grant federal preemption over state law.[25] The most evident method of preemption is when Congress clearly expresses intent to preempt state law through statutory language.[26] In *Jones v. Rath Packing Co.*,[27] the Supreme Court determined that when Congress "unmistakably ordains" that a federal statute is to preempt a state statute, the state statute must fail.[28] This "ordination" can come through explicit language or can be implied through the "structure and purpose" of the statute.[29] Therefore Congress' intent to preempt, whether express or implied, is sufficient to establish federal preemption over state law. The Court's duty is to determine that intent and, once determined, to establish whether the state law under contention infringes on the federal statute's intent to regulate.[30]

Even in the absence of express statutory language, congressional intent can demonstrate that an entire field of regulation was intended to be held under exclusive federal jurisdiction.[31] For example, the federal regulation may be structured in a manner where there is simply no room left for the states to supplement the regulation.[32] Therefore any state law attempting to regulate in that area must also fail on the basis of federal preemption.[33]

A federal law may also preempt state law even when there is no field preemption. If a court determines that the state law directly conflicts with federal law, to the extent that compliance with both statutes is impossible, the state statute must fail.[34] States cannot enact legislation that is inconsistent with a federal regulatory scheme.[35] Such laws must fail because they directly interfere or conflict with congressional purpose.[36] Also, in situations where it is impossible to adhere to both state and federal law, the federal law necessarily preempts the state law.[37]

A federal agency may also take action that preempts state law. The Supreme Court has established that a federal agency, "acting within the scope of its congressionally del-

22. The issue with state moratoria is one of many issues surrounding nuclear power. A detailed discussion of any topic outside of the preemption issues surrounding *PG&E*, including nuclear waste and Yucca Mountain, is beyond the intended scope of this Note.
23. On March 11, 2011, an earthquake the magnitude of 8.9 occurred off the east coast of Japan near the city of Honshu. *See* IAEA.ORG, *Japan Earthquake Update* (Mar. 20, 2011, 11:00 PM), http://iaea.org/newscenter/news/tsunamiupdate01.html. The earthquake, and a resulting tsunami, caused a major incident at Japan's Fukushima Daiichi nuclear power plant, resulting in a likely partial meltdown of three reactors at the plant. *Id.* While the incident and its resulting concerns may directly affect policy considerations regarding expansion of nuclear energy, it does not impact the legal arguments and analysis contained within this Note.
24. U.S. Const. Art. VI, cl. 2.
25. *See generally* Jones v. Rath Packing Co., 430 U.S. 519, 525–26 (1977); Shaw v. Delta Air Lines, Inc., 463 U.S. 85, 95–96 (1983); Fid. Fed. Sav. & Loan Ass'n v. De la Cuesta, 458 U.S. 141, 153 (1982); Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947); Hines v. Davidowitz, 312 U.S. 52, 66–67 (1941); Fla. Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142–43 (1963).
26. *See Jones*, 430 U.S. at 525; *Shaw*, 463 U.S. at 95–96.
27. *Jones*, 430 U.S. at 525 ("When Congress has unmistakably . . . ordained . . . that its enactments alone are to regulate a part of commerce, state laws regulating that aspect of commerce must fall. This result is compelled whether Congress' command is explicitly stated in the statute's language or implicitly contained in its structure and purpose.") (internal quotation marks omitted) (citation omitted).
28. *Id.*
29. *Id.*
30. *Shaw*, 463 U.S. at 95–96.
31. See Fid. Fed. Sav. & Loan Ass'n v. De la Cuesta, 458 U.S. 141, 153 (1982); Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947).
32. *See De la Cuesta*, 458 U.S. at 153 ("Absent explicit pre-emptive language, Congress' intent to supersede state law altogether may be inferred because '[t]he scheme of federal regulation may be so pervasive as to make reasonable the inference that Congress left no room for the states to supplement it,' because 'the Act of Congress may touch a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject,' or because 'the object sought to be obtained by the federal law and the character of obligations imposed by it may reveal the same purpose.'") (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947)).
33. *Id.*
34. *See* Hines v. Davidowitz, 312 U.S. 52, 66–67 (1941); *see also* Fla. Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142–143 (1963).
35. *Hines*, 312 U.S. at 66–67 ("[W]here the federal government, in the exercise of its superior authority in this field, has enacted a complete scheme of regulation and has therein provided a standard for the registration of aliens, states cannot, inconsistently with the purpose of Congress, conflict or interfere with, curtail or complement, the federal law, or enforce additional or auxiliary regulations.").
36. *Id.*
37. *Paul*, 373 U.S. at 142–43 ("A holding of federal exclusion of state law is inescapable and requires no inquiry into congressional design where compliance with both federal and state regulations is a physical impossibility for one engaged in interstate commerce." (citation omitted)).

egated authority," can preempt state law through the issuance of regulations.[38]

While the determination of congressional intent is left in large part to the Court, it is well established that the federal government has ample authority to regulate in a manner that preempts state law in the same area.

## II. The AEA, the NWPA, and the Decision in *PG&E*

Federal preemption applies to the field of nuclear energy under several statutes beginning with the AEA, which was passed in 1954.[39] The AEA was enacted to promote the development of nuclear energy in the United States.[40] The AEA established the Atomic Energy Commission ("AEC")[41] and gave it the authority to regulate the development and safety of commercial nuclear power. While the AEA preempts state regulation of safety or radiological hazards, it maintains the state's authority to regulate other areas pertaining to nuclear power plants.[42] The statute did not further clarify what fit under safety or radiological hazards, creating uncertainty to where federal regulation ended and state regulation began. The U.S. Court of Appeals for the Eighth Circuit initially dealt with the issue of state challenges to the federal government's preemption authority in nuclear power plant licensing and nuclear waste.

The Eighth Circuit's landmark decision in *Northern States Power Company v. Minnesota*[43] *("Northern States")* determined the preemption doctrine regarding nuclear energy for many years.[44] In *Northern States*, the Eighth Circuit dealt directly with the question of whether the federal government had sole authority to regulate nuclear waste.[45] The power company claimed that the AEC's regulations governing nuclear waste preempted the Minnesota license requirements for a waste disposal permit.[46] Although the Minnesota regulations occupied the same statutory area as the federal regulations, the state regulations were much more stringent.[47] The court determined that even though the congressional language did not use the terms "exclusive" or "sole" in describing the AEC's authority in regulating nuclear waste, the overall "tone" of the statute established the AEC's field preemption over nuclear waste.[48] The Supreme Court affirmed the decision and established that the AEC had exclusive authority to regulate radioactive waste from nuclear power plants.[49]

Congress' passage of the NWPA further established its intent for the NRC to have exclusive authority over regulations in the field of nuclear waste.[50] Congress determined that it was the federal government's responsibility to take possession of nuclear waste, even though the nuclear facilities were required to pay for the storage.[51] The NWPA not only established the federal government's exclusive authority to regulate nuclear waste, but also tasked the federal government with finding a permanent geologic repository for storage.[52] The breadth of the NWPA in regulating nuclear waste and its disposal gives credence to the theory that Congress intended the federal government to have exclusive authority to regulate in the field of nuclear waste.[53]

While the AEA and NWPA outline the areas in which the federal government has authority, the extent of that authority has been impacted in large part by the Supreme Court's decision in *PG&E*.[54]

In 1983 California passed a law establishing a moratorium on new nuclear power plants, prohibiting their licensing or construction within the state until the federal government developed and demonstrated a solution to the nuclear waste issue.[55] Pacific Gas & Electric Co., an electricity provider for northern and central California,[56] challenged the state law as preempted by the AEA, which was designed to promote the development of commercial nuclear energy.[57] The District Court found that California's moratorium was preempted by the AEA, but the U.S. Court of Appeals for the Ninth Circuit reversed, stating that the AEA specifically authorized states to regulate aspects of nuclear power generation other than "protection against radiation hazards."[58] The Ninth Circuit

38. La. Pub. Serv. Comm'n v. FCC, 476 U.S. 355, 369 (1985) (citing Capital Cities Cable, Inc. v. Crisp, 467 U.S. 691, 699 (1984); *De la Cuesta,* 458 U.S. at 154).
39. 42 U.S.C. §§ 2011-2297h-13 (2006).
40. *Id.* § 2011.
41. In 1974 Congress passed the Energy Reorganization Act wherein the AEC was split into the NRC and the Energy Research and Development Agency, the precursor to the U.S. Department of Energy. *A Short History of Nuclear Regulation*, U.S. Nuclear Reg. Comm'n, http://www.nrc.gov/about-nrc/short-history.html (last visited Aug. 22, 2010); *Energy Timeline from 1971-1980*, U.S. Dep't of Energy, http://www.energy.gov/about/timeline1971-1980.htm (last visited Nov. 13, 2010).
42. 42 U.S.C. § 2021(k) (2006).
43. 447 F.2d 1143 (8th Cir. 1971).
44. Susan L. Satter, *Congressional Recognition of State Authority Over Nuclear Power and Waste Disposal*, 58 Chi.-Kent L. Rev. 813, 817 n.26 (1982) (quoting Donald J. Moran, *On Preempting State Initiatives Relating to the Disposal of Nuclear Waste*, 61 Chi. B. Rec. 179, 186 (1979)).
45. *Northern States*, 447 F.2d at 1144.
46. *Id.* at 1145.
47. *Id.*
48. *Id.* at 1149. ("Of particular importance in demonstrating this assumption is the language in subsection (b), which provides that '*during the duration of such an agreement* it is *recognized* that the state shall have authority to regulate the materials *covered by the agreement* for the protection of the public health and safety from radiation hazards.' Manifestly, if the states at that time possessed concurrent jurisdiction to regulate radiation hazards associated with these materials, it would have been unnecessary for Congress affirmatively to recognize their regulatory authority by virtue of a state-federal compact and to limit their authority for the duration of and subject to the provisions of such agreement. Secondly, the language of § 2021 repeatedly refers to a 'discontinuance' of the Commission's regulatory authority or to the 'retention' or 'continuation' of authority in some areas.").
49. Minn. v. N. States Power Co., 405 U.S. 1035 (1972) (mem.).
50. 42 U.S.C. §§ 10101–10270 (2006).
51. *Id.* § 10131(a)(4)–(5).
52. *Id.* § 10131(a)(6). As stated above, this Note will not deal directly with the progression of the repository process, and more specifically with the issues surrounding Yucca Mountain.
53. *See infra* Part III.
54. *See* Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n, 461 U.S. 190, 205–23 (1983).
55. Cal. Pub. Res. Code §§ 25524.1(b), 25524.2 (West 2007).
56. *See generally Company Profile*, PGE.com, http://www.pge.com/about/company/profile (last visited Nov. 13, 2010).
57. *Pac. Gas & Elec. Co.*, 461 U.S. at 198–99.
58. *Id.* at 199–200 ("[The] nuclear moratorium provisions of § 25524.2 were not pre-empted because §§ 271 and 274(k) of the Atomic Energy Act, 42 U.S.C. §§ 2018 and 2021(k), constitute a congressional authorization for States to regulate nuclear power plants 'for purposes other than protection against radiation hazards.' The court held that § 25524.2 was not designed to provide

found that California's intent was to regulate the economic aspects of nuclear power plants, not safety from radiological hazards.[59]

When the Supreme Court granted certiorari, the Petitioner, Pacific Gas & Electric, argued that the Ninth Circuit's determination was erroneous because the state law went beyond economics and effectively regulated the construction and safety of nuclear power plants.[60] Even though the Ninth Circuit had determined that the state did not intend to regulate nuclear safety, Pacific Gas & Electric contended that the provisions of the California law establishing the moratorium "are more clearly written with safety purposes in mind."[61] Pacific Gas & Electric thus concluded that because the NRC has the sole authority to regulate nuclear safety under the AEA,[62] the AEA preempted California's statute.[63]

The State of California countered, arguing that although it was forbidden to regulate nuclear plant safety, it was authorized to "prohibit new construction until its safety concerns [were] satisfied by the federal government."[64] California maintained, alternatively, that its law restricting new nuclear power plants was motivated by economic concerns, rather than by safety concerns.[65] California claimed that the lack of a permanent federal solution to waste disposal created economic uncertainty because storage space at nuclear power plants could fill to capacity, leading to high costs for containment or causing a plant to shut down prematurely.[66] Therefore, California claimed it was authorized to pass a law in order to limit the potential damage from plants filling to capacity.[67]

While the Court rejected California's argument that a state may prohibit construction of nuclear power until the federal government satisfied the state's nuclear waste concerns, it ultimately upheld the Ninth Circuit's ruling and allowed California to regulate certain aspects of nuclear power.[68] In response to Pacific Gas & Electric's argument that the state statute frustrated the purpose of the AEA, the Court stated that, although the AEA's purpose was to promote the development of nuclear energy, it did not require the states to construct nuclear power plants.[69] In quoting the Ninth Circuit, the Supreme Court said that Congress did not envision that nuclear power would be developed "at all costs."[70] Thus, the states maintained the authority to determine their need for new power generation facilities along with other economic considerations, including rates and services.[71]

The Court proceeded to outline the respective authorities of the federal and state governments. According to the Court, states have regulated the economic aspects of electrical generation for years, and because it appears that Congress has legislated in an area traditionally held by the states, the Court should begin with the assumption that the state authority was "not to be superseded by the [AEA] unless that was the clear and manifest purpose of Congress."[72] The Court noted that the AEA specifically outlined the AEC's exclusive authority to regulate the safety and construction of new nuclear power plants, leaving no space for the states to regulate in that field.[73] The AEA did not, however, expressly state that the AEC held the authority to regulate the economic aspects of nuclear power plants, so the Ninth Circuit's reading of the statute supporting the state's authority in that field was not erroneous.[74] Thus, the Court found that because California maintained that its moratorium was based on the economic concerns surrounding nuclear waste storage, the statute was sufficiently distinct from the issue of safety to fall under the authority of the state.[75]

Pacific Gas & Electric also pointed to a safety designation released by the NRC, which stated that storage of spent fuel in pools was safe and should not halt the licensing of new plants.[76] They argued that California's moratorium conflicted with the NRC's conclusion since the moratorium was based on spent fuel storage concerns.[77] The Court responded by stating that the NRC's determination established that it was safe, but did not establish that it was economical.[78] The Court concluded that even though the federal government's argument held "considerable force," Congress had left the authority to regulate nuclear power plants based on economic concerns to the states.[79]

## III. Solutions: New Regulations, NWPA Amendments, or Reversal of PG&E

Even though *PG&E* has become a landmark case in federal preemption and administrative law, its faulty rationale continues to enable states to establish moratoria that unnecessarily inhibit the construction of new nuclear power plants. This Note discusses three possible ways to overcome the obstacles created by *PG&E*. First, the NRC should enact regulations under the NWPA to establish its sole authority to regulate in the area of nuclear waste. Second, Congress should amend the NWPA to state expressly its intention to establish field preemption over nuclear waste, including over any state law that employs a waste determination or consideration such

protection against radiation hazards, but was adopted because 'uncertainties in the nuclear fuel cycle make nuclear power an uneconomical and uncertain source of energy.'").

59. *Id.*
60. *Id.* at 204.
61. *Id.* at 215.
62. *Id.* at 204, 207.
63. *Id.* at 204.
64. *Id.* at 212.
65. *Id.* at 213.
66. *Id.* at 213–14.
67. *Id.* at 229 (Blackmun, J., concurring).
68. *Id.* at 212, 223.
69. *Id.* at 205.
70. *Id.* at 200 ("Congress did not intend that nuclear power be developed 'at all costs,' but only that it proceed consistent with other priorities and subject to controls traditionally exercised by the States and expressly preserved by the federal statute.").
71. *Id.* at 205.
72. *Id.* at 206 (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947)).
73. *See id.* at 207, 212.
74. *See id.* at 213–216.
75. *See id.*
76. *Id.* at 218.
77. *Id.* at 217.
78. *Id.* at 218–19.
79. *Id.* at 222–23.

as the one challenged in *PG&E*. Third, the Supreme Court should revisit the issue of preemption of the NWPA over the field of nuclear waste and reverse the precedent established through *PG&E*.

### *A. Promulgating Regulations Declaring Federal Preemption*

First, the NRC should enact regulations establishing its sole authority to regulate nuclear waste under the NWPA. The Supreme Court has upheld an administrative agency's authority to preempt state law provided that its regulations fall under the purpose of its authorizing statute.[80]

The NRC has sole authority to regulate in the field of nuclear waste through the NWPA.[81] The NWPA requires the NRC to license facilities involved in permanent storage of nuclear waste,[82] interim storage locations,[83] facilities designed to include retrievable storage,[84] and facilities involved in the storage of low-level waste.[85] Congress has, in effect, required an NRC license for any facility that deals with nuclear waste.[86] Because of these requirements, the NRC would be authorized to enact regulations under the NWPA that would preempt any state law attempting to regulate nuclear waste.

Enacting regulations that establish the NRC's sole authority over nuclear waste would accomplish two objectives. Barring any litigation, it would establish the NRC's intent to preempt any state law that attempts to regulate nuclear waste or use nuclear waste considerations as part of the state's determinations, as done by California in *PG&E*. Should the NRC's authority to preempt state law be challenged, however, these regulations would provide the necessary means for reversing the precedent established in *PG&E*.

An additional benefit to the issuance of regulations is that the NRC would not have to go through the legislative process; it would only need to meet the notice and comment requirements of administrative rulemaking.[87] This process alleviates the need to secure the requisite number of votes and paves the path for a court to decide the matter if the regulation is challenged. Therefore, having the NRC issue regulations regarding nuclear waste would be a favorable option.

### *B. Amending the NWPA*

In addition to enacting regulations that clarify the NRC's authority over nuclear waste, Congress could simultaneously amend the NWPA to expressly grant the NRC sole authority to regulate in the field of nuclear waste. These processes are not mutually exclusive and could occur at the same time. Amending the NWPA would solve the issue raised by the Court in *PG&E* where Congress was regulating in an area formerly occupied by the states.[88] The Court's inquiry required it to look for express congressional intent to supersede state authority,[89] and inserting language into the NWPA would accomplish just that.

Two logical locations exist where Congress could insert such language. Congress could insert language in section 101 of the NWPA, which outlines state participation in the NWPA.[90] Congress could insert section (c), which would state: "Notwithstanding the aforementioned participation by the States and Indian Tribes, the Commission shall have the sole authority to regulate in the field of nuclear waste."[91]

Congress could also insert language under section 111(b), which outlines the purposes of the NWPA.[92] Congress could insert the following language: "(5) to establish in the Commission the sole authority to regulate in the field of nuclear waste, with consultation and participation of the States and affected Indian Tribes." This language would allow the states to participate and consult, but would clearly establish the NRC's sole authority in regulating nuclear waste.

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80. *See, e.g.,* Fid. Fed. Sav. & Loan Ass'n v. De la Cuesta, 458 U.S. 141, 154 (1982).
81. *See supra* text accompanying notes 43–49 (describing the establishment of this authority in *Minn. v. N. States Power Co.,* 405 U.S. 1035 (1972) (mem.).
82. 42 U.S.C. § 10134(b),(d).
83. *Id.* § 10153.
84. *Id.* § 10161.
85. *Id.* § 10171(a)–(b).
86. *See id.* §§ 10134, 10153, 10161, 10171.
87. Administrative Procedure Act, 5 U.S.C. § 553 (2006). An administrative agency is required to publish notice of a proposed rule in the federal register. Following notice, an individual may submit comments to the agency, including "written data, views, or arguments with or without opportunity for oral presentation." The agency is then required to adopt a general statement into the final rule which addresses significant comments.
88. Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n., 461 U.S. 190, 206 (1983).
89. *Id.*
90. *See* 42 U.S.C. § 10121.
91. *Id.* The text of the preceding paragraphs in the NWPA is as follows:
    (a) Notification to States and affected Indian tribes. Notwithstanding the provisions of section 10107 of this title, upon any decision by the Secretary or the President to develop a repository for the disposal of high-level radioactive waste or spent nuclear fuel resulting exclusively from atomic energy defense activities, research and development activities of the Secretary, or both, and before proceeding with any site-specific investigations with respect to such repository, the Secretary shall notify the Governor and legislature of the State in which such repository is proposed to be located, or the governing body of the affected Indian tribe on whose reservation such repository is proposed to be located, as the case may be, of such decision.
    (b) Participation of States and affected Indian tribes. Following the receipt of any notification under subsection (a) of this section, the State or Indian tribe involved shall be entitled, with respect to the proposed repository involved, to rights of participation and consultation identical to those provided in sections 10135 through 10138 of this title, except that any financial assistance authorized to be provided to such State or affected Indian tribe under section 10136(c) or 10138(b) of this title shall be made from amounts appropriated to the Secretary for purposes of carrying out this section.
92. 42 U.S.C. § 10131(b). The language included in section 111(b) is:
    (b) The purposes of this part are;
        (1) to establish a schedule for the siting, construction, and operation of repositories that will provide a reasonable assurance that the public and the environment will be adequately protected from the hazards posed by high-level radioactive waste and such spent nuclear fuel as may be disposed of in a repository;
        (2) to establish the Federal responsibility, and a definite Federal policy, for the disposal of such waste and spent fuel;
        (3) to define the relationship between the Federal Government and the State governments with respect to the disposal of such waste and spent fuel; and
        (4) to establish a Nuclear Waste Fund, composed of payments made by the generators and owners of such waste and spent fuel, that will ensure that the costs of carrying out activities relating to the disposal of such waste and spent fuel will be borne by the persons responsible for generating such waste and spent fuel.

Prohibiting states from using waste determinations as a basis for their moratoria would not prohibit states from using other justifications. For example, Hawaii's moratorium is based neither on waste determinations nor on economic considerations, so it is unlikely to be affected by a reversal of *PG&E*.[93] However, eliminating waste determinations as a basis for moratoria would invalidate existing moratoria that are based on such determinations.[94] Affected states would have to pass new moratoria, which would probably prove difficult considering the recent increase in national support for nuclear energy.[95]

One argument against amending the NWPA is that the states have the ability to amend the moratoria already on the books should they desire to change their position on nuclear power.[96] States enacted the moratoria and they retain the ability to repeal them. Some scholars have noted, however, that states are more likely to pass a new law or amend an existing law than repeal a statute.[97] Therefore, enacting new laws or amending laws already on the books is likely to have a much higher success rate than attempting to repeal old laws.[98] Although some states, such as Illinois, have made progress in overturning their moratoria, others have been blocked by legislators and anti-nuclear groups.[99]

### C. *Overturning* PG&E

While NRC regulations or amendments to the NWPA that establish federal preemption over nuclear waste determinations would likely provide an opportunity for the Supreme Court to reconsider *PG&E*, the Court could also seize upon any litigation involving federal preemption and the NWPA to revisit its decision. Indeed, such a decision seems inevitable. In dealing with the litigation surrounding Yucca Mountain, the Ninth Circuit briefly addressed the question of NWPA preemption, but stated that the Supreme Court had not yet made this determination.[100] Regardless of the course that the litigation takes, the Supreme Court should grant certiorari in the next case involving preemption of nuclear waste through the NWPA. Even though the Court's decision in *PG&E* has been accepted without much debate, significant issues remain with the Court's rationale that leave open the possibility for reversal.

#### 1. Nuclear Power as a Novel Technology

The Court in *PG&E* began its analysis of the issue by stating that the AEA was Congress' attempt at regulating electrical generation, an area traditionally occupied by the states. Therefore, the Court was required to look for express congressional intent to determine preemption.[101] While states had indeed typically regulated electrical generation, nuclear electricity generation was a novel technology that had been treated differently since its discovery.[102] Furthermore, the AEA specifically authorized the development of commercial nuclear power.[103] The Court should not have treated the AEA as an outgrowth of electrical generation, but as the emergence of a brand new industry and technology. Then, the Court would not have been required to analyze congressional intent under the standard more deferential to the state, paving the way for a broader interpretation of the statute.

While it is plausible to argue that nuclear energy is not sufficiently different from other forms of electrical generation to be considered a new technology, the federal government's treatment of nuclear energy indicates otherwise. The federal government established the AEC to assure that nuclear energy was developed safely.[104] Congress recognized the catastrophic power of nuclear energy and the potential for widespread damage in the event of a nuclear accident.[105] Because no other energy source includes this catastrophic

93. *See* Haw. Const. art. XI, § 8.
94. *See supra* note 16 and accompanying text.
95. *See* Jeffrey M. Jones, *Support for Nuclear Energy Inches Up to New High*, Gallup, Mar. 20, 2009, http://www.gallup.com/poll/117025/support-nuclear-energy-inches-new-high.aspx (showing that support of nuclear power in America is at its highest in years); Press Release, Nuclear Energy Inst., Nearly Seven of 10 Americans Favor Nuclear Energy, Support Building New Reactors at Existing Sites (Sept. 25, 2006) (on file with author), *available at* http://nei.org/newsandevents/americansfavornuclear (explaining that close to seventy percent of Americans support building a new nuclear reactor close to where they live); *Expand Nuclear, Survey Says*, Nuclear Energy Inst., http://nei.org/resourcesandstats/publicationsandmedia/insight/insightnovember2009/expand-nuclear-survey-says (last visited Nov. 13, 2010) (stating that, among other things, the vast majority of Americans believe nuclear power plants are "safe and secure" and that close to sixty percent would support building a new nuclear power plant).
96. *See* U.S. Const. amend. X.; U.S. Const. art. VI, cl. 2; *Gonzales v. Oregon,* 546 U.S. 243, 270 (2006) ("[T]he structure and limitations of federalism . . . allow the States great latitude under their police powers to legislate as to the protection of the lives, limbs, health, comfort, and quiet of all persons." (internal quotation marks omitted)).
97. Melissa J. Mitchell, *Cleaning Out the Closet: Using Sunset Provisions to Clean Up Cluttered Criminal Codes*, 54 Emory L.J. 1671, 1679 (2005) ("In the American system of government, it has long been the case that legislators are generally reluctant to repeal existing laws. It seems that it is a far *easier* task to get a legislature to enact a new law than it is to get a legislature to repeal an existing one. Rather than repeal laws that are virtually obsolete, legislatures allow such laws to remain on the statute books even though they are neither enforced nor observed.") (emphasis added).
98. *See id.*
99. *See* Jamey Dunn, *Nuclear Renaissance: Illinois Lawmakers Consider Lifting a 23-year-old Moratorium on New Reactors*, Ill. Issues, July/Aug. 2010, *available at* http://illinoisissues.uis.edu/archives/2010/0708/nuclear.html*; Nuclear Industry Fails in State-Level Bids*, SustainableBusiness.com (Aug. 8, 2009), http://www.sustainablebusiness.com/index.cfm/go/news.display/id/18784 (describing failed efforts to lift moratoria in Kentucky, Minnesota, and West Virginia, among other states).
100. United States v. Morros, 268 F.3d 695, 702 (9th Cir. 2001) ("Congress may have preempted the field of nuclear waste disposal. The Supreme Court has not yet decided this issue."); Nevada v. Watkins, 914 F.2d 1545, 1561 (9th Cir. 1990) ("The [Supreme] Court has not yet confronted the issue whether the NWPA 'occupies the field' of nuclear waste disposal."); *see also* United States v. Nevada, No. 2:00-CV-0268-RLH-LRL, 2007 U.S. Dist. LEXIS 69177, at *28–29 (D. Nev. Aug. 31, 2007) (differentiating between preemption of state nuclear waste laws and state water laws). *But see* Lawrence Flint, *Shaping Nuclear Waste Policy*, 28 B.C. Envtl. Aff. L. Rev. 163, 187–88 (2000-2001) ("[E]ven in *Pacific Gas & Electric*, the case that limited the holding of *Northern States Power v. Minnesota*, dicta suggests that the Court saw the NWPA as occupying the entire field of nuclear waste issues arising from currently operating reactors.").
101. Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n, 461 U.S. 190, 206 (1982) (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947)).
102. 42 U.S.C. § 2012(d), (f).
103. The History of Nuclear Energy, *supra* note 6, at 8.
104. *See* 42 U.S.C. § 2012(d), (f).
105. *See id.* § 2012(f).

potential,[106] nuclear energy is sufficiently different to be considered as a unique and new technology. Therefore, nuclear energy should not be within the area historically regulated by the states.

### 2. Economic Concerns Based on Waste Considerations

When the Court stated that Congress was regulating in an area that had historically been occupied by the states, it misinterpreted the intent of the California statute because the statute was not focused on regulating actual nuclear generation, but rather on regulating nuclear waste. As stated above, the Court found that California's moratorium was based on the economic concern that unresolved waste issues could drive up costs by prematurely closing a plant.[107] The economic determination was based on a nuclear waste issue.[108] Because states never had the authority to regulate waste,[109] the Court should have recognized that the California statute was in effect making a determination based on waste concerns, which would have resulted in federal preemption.[110] Instead, the Court bowed out of an inspection of California's motives, stating that a determination of motive is often an "unsatisfactory venture."[111] By failing to make a determination on motive, the Court effectively authorized states to enact any law infringing on the preempted area of safety by simply claiming economic motivation. The Court may be correct that an inquiry into motive may be an "unsatisfactory venture," but the alternative could lead to the widespread allowance of state regulation in preempted areas of nuclear safety. The Court, however, indicated that Congress, rather than the judicial system, should determine "whether the state has misused the authority left in its hands."[112] The Court stated that it "should not assume the role which our system assigns to Congress."[113]

In this situation, it would appear that the Court is seeking to impose on Congress its responsibility over cases and controversies. The judiciary's power "extend[s] to all cases, in Law and Equity, arising under this Constitution, [and] the Laws of the United States . . . ."[114] The Court in *PG&E*, however, seems to suggest that Congress is better suited to determine whether a state is violating a federal law.[115] The Court is better suited to decide controversies on a case-by-case basis in order to assure that the laws enacted by Congress are followed. The Court should not push that responsibility onto another branch of government, and therefore should have decided the issue in this case.

The Court also claimed that the economic fears of prematurely closing a power plant would "largely evaporate" once a satisfactory disposal technology was found.[116] Since the decision in 1983, the federal government has yet to demonstrate or satisfactorily develop a technology for waste disposal.[117] Yet, over twenty-five years after the decision in *PG&E*, no nuclear power plant has been forced to close because of a lack of storage capacity.[118] Various storage techniques have been developed, including dry cask storage,[119] which greatly increases nuclear power plant capacity to store waste on-site.[120] Because the economic justification for the Court's decision has proven to be erroneous, the Court should overturn its ruling and reverse its precedent.

### 3. Failure to Examine the NWPA

The Court also failed to examine the NWPA in sufficient detail.[121] The Court was positioned perfectly to include the NWPA in its opinion since it had been passed only months prior to the decision.[122] The Court did include a brief reference to the NWPA, but limited its discussion to whether or not the NWPA provided a sufficient answer to the waste issue for the states' purposes.[123]

Additionally, in its analysis, the Court failed to consider whether the NWPA vested the NRC with sole authority to regulate in the field of nuclear waste. While the Supreme Court failed to consider the issue, the Ninth Circuit has expressed the possibility that such preemption does exist.[124] Ultimately, the issue cannot be resolved until the Supreme Court hears a case regarding preemption and the NWPA.

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106. *See* Mark Gimein, *Yes, Nuclear Accidents Do Happen*, St. Petersburg Times, June 27, 2010, http://www.tampabay.com/news/perspective/yes-nuclear-accidents-do-happen/1104795.
107. *See supra* text accompanying note 79.
108. *See supra* text accompanying note 78.
109. Northern States Power Co. v. Minnesota, 447 F.2d 1143, 1147 (8th Cir. 1971).
110. *Id.* at 1149.
111. Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n, 461 U.S. 190, 216 (1982) (citing United States v. O'Brien, 391 U.S. 367, 383 (1968)).
112. *Id.*
113. *Id.* at 223.
114. U.S. Const. art. III, § 2, cl. 2.
115. *Pac. Gas & Elec. Co.*, 461 U.S. at 216.
116. *Id.* at 214.
117. *See* Mascaro, *supra* note 16.
118. Allison Macfarlane, *Interim Storage of Spent Fuel in the United States*, 26 Ann. Rev. Energy & Env't 201, 211–12 (2001).
119. Dry Cask Storage is a method whereby spent fuel that has already been cooled in pools of water for at least one year is surrounded by an inert gas and encapsulated inside a container. These containers are then usually welded shut or bolted closed in order to avoid leakage. The containers are then stored on-site at the nuclear power plants. *Dry Cask Storage*, U.S. Nuclear Reg. Comm'n, http://www.nrc.gov/waste/spent-fuel-storage/dry-cask-storage.html (last visited Nov. 13, 2010).
120. *Id.*
121. *See Pac. Gas & Elec. Co.*, 461 U.S. at 219–20.
122. *Id. at* 190. The case was argued before the Supreme Court in January, 1983, and was decided in April of the same year. The Court points out that the NWPA was passed in the final week of the 97th Congress in 1982. *Id.* at 219.
123. *Id.* at 219–20.
124. United States v. Morros, 268 F.3d 695, 702 (9th Cir. 2001) ("Congress may have preempted the field of nuclear waste disposal. The Supreme Court has not yet decided this issue."); Nevada v. Watkins, 914 F.2d 1545, 1561 (9th Cir. 1990) ("The [Supreme] Court has not yet confronted the issue whether the NWPA 'occupies the field' of nuclear waste disposal."). *But see* Lawrence Flint, *Shaping Nuclear Waste Policy*, 28 B.C. Envtl. Aff. L. Rev. 163, 187–88 (2000) ("[E]ven in *Pacific Gas & Electric*, the case that limited the holding of *Northern States Power v. Minnesota*, dicta suggests that the Court saw the NWPA as occupying the entire field of nuclear waste issues arising from currently operating reactors."); *see also* United States v. Nevada, No. 2:00-CV-0268-RLH-LRL, 2007 U.S. Dist. LEXIS 69177, at *10–11 (D. Nev. Aug. 31, 2007) (differentiating between preemption of state nuclear waste laws and state water laws).

### 4. Ideological Shift on the Court and Economic Developments

The past twenty-five years have brought a number of changes not only to the nuclear industry, but also to the make-up of the Court itself. The conservative leanings of today's Court may suggest a willingness to reconsider *PG&E* because conservatives are more likely to support nuclear energy than liberals.[125] This inclination may be moderated, however, by conservatives' preference for policies that limit federal control over states and oppose broad sweeping regulations overall.[126] While the composition of the Court could lead to a change in past precedent, it is more likely that recent economic developments since the *PG&E* decision would be more influential.

The economics of nuclear power plants have improved with the passage of time.[127] Although the Court in *PG&E* was concerned that nuclear power plants would incur increased costs without a permanent solution to the waste issue, nuclear power plants instead have developed technology and procedures that now allow them to operate more efficiently.[128] Instead of being a risky investment, nuclear power has become one of the cheapest ways to produce energy, running contrary to the concerns expressed by the Court in *PG&E*.[129]

### 5. Availability of a Cause of Action

One of the main obstacles to overturning *PG&E* is the availability of a cause of action involving preemption, nuclear waste, and the NWPA. The best opportunity for the Supreme Court to reconsider *PG&E* was through the litigation surrounding the siting studies performed by the U.S. Department of Energy for the Yucca Mountain geologic repository. These studies generated substantial litigation, which was one reason for the significant delay in the process.[130] Unfortunately, the recent decreases in funding for the Yucca Mountain license application and the Obama administration's withdrawal of the application[131] suggest that the Yucca Mountain project could fail without the need for further litigation on federal preemption.

While any of the three solutions presented in this Note by itself could correct the issue of states using nuclear waste determinations as a basis for state moratoria, they are not mutually exclusive. If Congress were to amend the NWPA, that could persuade the NRC to issue regulations clarifying its authority over nuclear waste. Either of those two actions could lead to litigation regarding the validity of existing state moratoria under the new regulations or the amended language of the NWPA. Whatever the course of action, it is clear there are solutions to the issues created by *PG&E.*

## IV. Conclusion

The grave concerns with climate change have led the United States to consider many different paths away from its current coal-dominated energy consumption. Even with the most recent expansion of renewable sources of energy, coal continues to account for close to fifty percent of U.S. energy generation.[132] The last two administrations have claimed that the country needs a new generation of nuclear power plants in order to meet increased energy demand while at the same time combating climate change.[133] However, certain obstacles remain to acting on those declarations.

While states have the ultimate say in what energy sources they employ to meet their power needs, *PG&E* has allowed states to institute moratoria without the proper basis, thereby eliminating the option of nuclear power in many states. Any of the three branches of government can act to amend this situation. The executive branch, through the NRC, should enact new regulations clarifying its authority over nuclear waste and eliminating a state's ability to use nuclear waste determinations as a basis for their moratoria on new nuclear projects. The legislative branch should amend the NWPA to include language expressly granting the NRC exclusive authority over nuclear waste policy, thereby eliminating any argument of state authority over nuclear waste. Finally, the Supreme Court should grant certiorari in the next case involving preemption and the NWPA in order to correct its faulty reasoning in *PG&E*. With the pressing concerns of climate change, Congress or the Obama administration should act to eliminate these unnecessary barriers to a carbon-free source of electricity: nuclear energy. By clarifying the authority Congress placed in the NRC through the NWPA, the United States will be better suited to meet rising energy demand without adding to the extreme dangers of climate change.

125. *See* David Bergland, *Comparing Liberal, Conservative, and Libertarian Answers*, Advocates for Self-Government, http://server.theadvocates.org/library/comparison-of-philosophies.html (last visited Nov. 13, 2010).
126. *See generally* Edwin J. Feulner & Doug Wilson, Getting America Right, The True Conservative Values Our Nation Needs Today 20, 51–52 (2007).
127. *See generally The Economics of Nuclear Power*, World Nuclear Ass'n (July 2010), http://www.world-nuclear.org/info/inf02.html.
128. *See generally id.*
129. See generally *id.*
130. *See Fight Over Yucca Mountain Site Moves to NRC,* The BLT: The Blog of LegalTimes (July 02, 2010, 1:02 PM), http://legaltimes.typepad.com/blt/2010/07/fight-over-yucca-mountain-waste-site-moves-to-nrc.html. *See generally* Nuclear Energy Inst. v. EPA, 373 F.3d 1251 (D.C. Cir. 2004); United States v. Morros, 268 F.3d 695 (9th Cir. 2001); Nevada v. Watkins, 914 F.2d 1545 (9th Cir. 1990).
131. Mascaro, *supra* note 16. *But see* Siobhan Hughes, *Panel Blocks Move to Scrap Yucca Site*, Wall St. J., June 30, 2010, http://online.wsj.com/article/NA_WSJ_PUB:SB10001424052748704103904575337090621912512.html.
132. *Electric Power Annual*, *supra* note 1, at 2.
133. 156 Cong. Rec. H414, H416 (daily ed. Jan. 27, 2010) (Pres. Obama State of the Union Address); *Bush Urges More Refineries, Nuclear Plants*, Cnn.com (Apr. 28, 2010), http://www.cnn.com/2005/POLITICS/04/27/bush.energy/.