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NOTES

JURISDICTION OF THE FPC OVER THERMAL ELECTRIC POWER PLANTS

Section 4(e) of the Federal Power Act¹ authorizes the Federal Power Commission (FPC) to issue licenses to facilities constructed “for the development, transmission and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction” This section also empowers the FPC to license the use of surplus water or water power from any Government dam. Despite the broad wording of section 4(e), the Supreme Court in *Chemehuevi Tribe of Indians v. FPC*² construed the language of this section as giving the FPC the authority to license only the construction of hydroelectric power plants.³ The Court also imposed a similar limitation on the FPC’s power to license the use of surplus water.⁴

In *Chemehuevi* complainants argued that section 4(e) of the Federal Power Act allowed the FPC to license thermal electric power generating plants⁵ that withdrew cooling water from navigable waterways.⁶ The Supreme Court rejected this contention⁷ and also found support for the conclusion “that Congress did not intend to give the Commission licensing jurisdiction with respect to thermal-electric power plants.”⁸ The decision in *Chemehuevi*, however, is not necessarily dispositive of the issue of whether the FPC possesses any statutory jurisdiction to control steam-electric plants; in fact, the Commission may exercise a power similar in nature to a licensing authority with respect to certain fossil fueled plants. The FPC

1. 16 U.S.C. § 797(e) (1970) (originally enacted as the Federal Water Power Act, ch. 285, § 4(d), 41 Stat. 1065 (1920)). For a fuller version of the pertinent text, see note 23 *infra*.

2. 420 U.S. 395 (1975).

3. *Id.* at 412.

4. *Id.* at 413.

5. In this Note, the terms “thermal electric” and “steam-electric” will be used to describe fossil fueled electric generating plants. A fossil fueled plant creates heat by burning fossil fuels and then using the heat to create steam from water in a boiler. The steam is forced through turbines which are connected to electricity generators. The steam ultimately is condensed through the use of cooling water which absorbs the excess heat, and the condensed water then is returned to the boiler. See N. FABRICANT & R. HALLMAN, TOWARD A RATIONAL POWER POLICY: ENERGY, POLITICS, AND POLLUTION 73 (1971).

6. 420 U.S. at 398.

7. *Id.* at 412-13.

8. *Id.* at 410-11.

concluded recently in *Sierra Club*⁹ that under certain circumstances the Commission has the authority both to control the initial construction of a thermal electric plant¹⁰ and to regulate partially its subsequent operation.¹¹ This decision apparently establishes an important exception to the Court's holding in *Chemehuevi*. This Note will trace the development of Part I of the Federal Power Act¹² and delineate the changing scope of the FPC's licensing jurisdiction under the Act. Recent trends and developments in the electric power industry that have imposed pressures on Congress, the courts and the Federal Power Commission itself to redefine or amend the statutory licensing jurisdiction of the FPC also will be considered. Finally, the *Sierra Club* decision will be examined so as to ascertain the FPC's response to these pressures, to discover the statutory basis underlying the authority exercised by the Commission, and to determine the scope and potential impact of that decision.

THE DEVELOPMENT OF PART I OF THE FEDERAL POWER ACT

Part I of the Federal Power Act is an amended version of the Federal Water Power Act of 1920.¹³ Congress passed the 1920 Act in response to fears of conservationists that private appropriation of hydroelectric power sites¹⁴ without adequate governmental controls would result in uncoordinated developments that could hamper the navigability of the nation's waters,¹⁵ prevent the development of the

9. 10 FED. POW. SERV. (MB) 5-32.1 (FPC 1976) (presently in June 22, 1976-Nov. 8, 1976 Transfer Binder).

10. *Id.* at 5-32.11.

11. *Id.* at 5-32.12.

12. 16 U.S.C. §§ 791-824 (1970).

13. Federal Water Power Act, ch. 285, 41 Stat. 1063 (1920) (current version at 16 U.S.C. §§ 791-824 (1970)).

14. Before 1900, steam power plants were the major source of electricity because such fossil fueled facilities could be constructed close to where the electricity was utilized. 1 FPC, NATIONAL POWER SURVEY 13 (1964); Pinchot, *The Long Struggle for Effective Federal Water Power Legislation*, 14 GEO. WASH. L. REV. 9 (1945). The development of alternating current in the late 1800's, however, made feasible the transmission of electric energy over large distances. 1 FPC, NATIONAL POWER SURVEY 13 (1964). The use of alternating current made the development of hydroelectric power plants possible at sites where it was previously impractical and as a result, private developers began to appropriate the best water power sites. See J. KERWIN, FEDERAL WATER-POWER LEGISLATION 45-49 (1926). See discussion in *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207, 1216-22 (D.C. Cir. 1973), *vacated on other grounds*, 420 U.S. 395 (1975).

15. In 1906, Congress required that government permission be obtained before constructing dams in navigable waters. Act of June 21, 1906, ch. 3508, § 1, 34 Stat. 386. The Secretary of the Army and the Chief of Engineers were instructed to attach conditions to their approval of dam sites requiring that the owner maintain the navigable quality of the waterway. *Id.*

country's maximum hydroelectric power potential,¹⁶ and allow private owners to earn excess profits at the public's expense.¹⁷ The Federal Water Power Act¹⁸ was designed to appease the conservationists by providing for government regulation of the development of hydroelectric energy.¹⁹ The preface to the Federal Water Power Act stated that it was "[a]n Act to create a Federal Power Commission; to provide for the improvement of navigation; the development of water power; and for other purposes."²⁰ No statements or provisions in the Act itself or in its legislative history indicated explicitly that any segment of the electric power industry other than hydroelectric projects was subject to government regulation.²¹

The Federal Power Commission, the entity created by The Federal Water Power Act,²² determined, in light of both the legislative history and the textual provisions of the Act, that its licensing jurisdiction under section 4(e)²³ extended only to water power projects.²⁴

16. In 1910, Congress amended the 1906 Act to require that, when approving dams for power purposes, consideration should be given to "a comprehensive plan for the improvement of the waterway over which it is to be constructed with a view to the promotion of its navigable quality and for the full development of water power" Act of June 23, 1910, ch. 360 § 1, 36 Stat. 594 (formerly ch. 3508, § 1, 34 Stat. 386 (1906)).

17. Because steam plants were more costly to operate than hydroelectric facilities, it was argued that owners of hydroelectric plants would make excess profits by charging a flat rate set at a level high enough to allow steam plants to make a profit. See 53 CONG. REC. 10450 (1916) (remarks of Rep. Ferris). See also J. KERWIN, *supra* note 14, at 199-200.

18. Federal Water Power Act, ch. 285, 41 Stat. 1063 (1920) (current version at 16 U.S.C. §§ 791-824 (1970)). The 1920 Act contained most of the provisions of an earlier bill, H.R. 8716, 65th Cong., 2d Sess. (1918), which was not enacted because of a Senate filibuster. J. KERWIN, *supra* note 14, at 253-54. In a letter to the Chairman of the Special House Committee on Water Power, the primary drafters of the earlier bill stated: "Water-power legislation should have in view not only the maintenance of the rights of the public in the national resources, but also the adequate protection of private capital by which such resources are developed." Letter from Secretary of War Newton D. Baker, Secretary of the Interior Franklin K. Lane, and Secretary of Agriculture D. F. Houston to Rep. Thetus W. Sims, Feb. 27, 1918, *quoted in* 56 CONG. REC. 2942 (1918).

19. Pinchot, *supra* note 14, at 19.

20. 41 Stat. 1063 (1920).

21. See discussion in *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207, 1222-23 (1973), *vacated on other grounds*, 420 U.S. 395 (1975). The failure of Congress to indicate that the Federal Water Power Act conferred upon the FPC the power to regulate any part of the electric industry other than hydroelectric facilities is significant because in 1935, steam electric plants generated approximately 70 percent of the nation's electric power. 1 FPC, NATIONAL POWER SURVEY 63 (1964).

22. Federal Water Power Act § 1, ch. 285, 41 Stat. 1063 (1920), as amended 16 U.S.C. § 792 (1970).

23. 16 U.S.C. § 797(e) (1970). Section 797(e) provides in pertinent part that the Commission is authorized and empowered:

(e) To issue licenses to citizens of the United States, or to any association of such citizens, or to any corporation organized under the laws of the United

Because the FPC construed "water power" to mean only "hydroelectric power", it refused to exercise any licensing authority over facilities not connected with a hydroelectric project.²⁵ The FPC's restricted view of its licensing jurisdiction remained unchanged when the Federal Water Power Act was incorporated into the Federal Power Act.²⁶ Thus, Congress had concurred implicitly in the FPC's interpretation of its licensing jurisdiction;²⁷ no expansive additions were appended to the Commission's licensing authority either in 1930 when the Federal Power Commission became an independent agency,²⁸ or in 1935 when the Federal Water Power Act was amended and made Part I of the Federal Power Act.²⁹

Prior to 1935 no court had treated the issue of whether the Federal Water Power Act granted the FPC authority to regulate steam plants located on navigable waterways. After the passage of the Federal Power Act, however, the Supreme Court in several decisions implied in dicta that the Commission's licensing authority extended only to hydroelectric projects and not to thermal electric power plants.³⁰ The strongest dictum is in *FPC v. Union Electric Co.*³¹ in

States or any State thereof, or to any State or municipality for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any Government dam

24. 1 FPC ANN. REP. 51-52 (1921).

25. *Id.* at 155.

26. *See, e.g.*, 53 FPC ANN. REP. 20-21 (1973); 42 FPC ANN. REP. 8, 12-13 (1962).

27. *See discussion in* Chemehuevi Tribe of Indians v. FPC, 420 U.S. 395, 410 (1975).

28. Act of June 23, 1930, ch. 572, § 1, 46 Stat. 797 (current version at 16 U.S.C. § 792 (1970)).

29. Act of Aug. 26, 1935, ch. 687, §§ 201-12, 49 Stat. 838 (codified in scattered sections of 16 U.S.C.). The amendments to the Federal Water Power Act were described as "minor." H.R. REP. NO. 1318, 74th Cong., 1st Sess. 7 (1935).

30. *See, e.g.*, FPC v. Union Elec. Co., 381 U.S. 90, 109-10 (1965); United States *ex rel.* Chapman v. FPC, 345 U.S. 153, 167 (1953); First Iowa Hydro-Electric Coop. v. FPC, 328 U.S. 152, 171-72, 180-81 & n.23 (1946). There has been almost unanimous agreement that the FPC was correct in limiting its licensing authority to hydroelectric projects. Pinchot, *supra* note 14, at 19-20; Ramey & Murray, *Delays and Bottlenecks in the Licensing Process Affecting Utilities: The Role of Improved Procedures and Advance Planning*, 1970 DUKE L.J. 25, 35 & n.47; Tarlock, Tippy, & Francis, *Environmental Regulation of Power Plant Siting: Existing and Proposed Institutions*, 45 S. CAL. L. REV. 502, 514 (1972). *But see* Gatchell, *Jurisdictional Problems under the Federal Water Power Act of 1920*, 14 GEO. WASH. L. REV. 42, 44 (1945),

which the Court observed that the primary purpose of the Federal Water Power Act was to promote the development "of hydroelectric power to meet the needs of an expanding economy."³² The Court also implied that the scope of the FPC's responsibility had not changed with the passage of the Federal Power Act.³³ Prior to *Union Electric*, in *First Iowa Hydro-Electric Cooperative v. FPC*³⁴ the Supreme Court noted that the Federal Water Power Act was a statutory scheme designed to secure the comprehensive development of the country's water resources.³⁵ In *Union Electric*, however, the Court clearly indicated that it viewed the FPC's statutory duty to develop comprehensively the nation's water resources³⁶ as relating only to the development of hydroelectric projects.³⁷ In explaining the FPC's possession of licensing jurisdiction over hydroelectric power plants that generated electricity for interstate use, but lack of jurisdiction over steam plants located beside navigable rivers, the Court stated that Part I of the Federal Power Act concerns "the utilization of water resources and particularly the power potential in water."³⁸

In view of the strong dicta in *Union Electric* and the FPC's long-standing restrictive interpretation of its jurisdiction, the Supreme

in which the author, although conceding that the FPC has only exercised licensing authority over hydroelectric facilities, recognizes that the language in section 4(e) of the Federal Power Act could support FPC licensing jurisdiction over steam plants.

31. 381 U.S. 90 (1965).

32. *Id.* at 99 (footnote omitted).

33. *Id.* at 110.

34. 328 U.S. 152 (1946).

35. *Id.* at 180. Other statements in *First Iowa Cooperative*, implying that the purpose of the Act was limited to developing hydroelectric power, however, contradicted the Court's statement. *Id.* at 171-72, 180-81 n.23.

36. Section 10(a) of the Federal Power Act provides that all licenses issued under the Act shall be on the following conditions:

That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adopted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes; and if necessary in order to secure such plan the Commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval.

16 U.S.C. § 803(a) (1970).

37. 381 U.S. at 99, 101, 110. *Accord*, *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207, 1231 (D.C. Cir. 1973), *vacated on other grounds*, 420 U.S. 395 (1975).

38. 381 U.S. at 110. The three dissenting Justices in *Union Electric* also agreed that the FPC had no authority to license steam electric plants. 381 U.S. at 115 (dissenting opinion). For a review of the facts and the holding in *Union Electric*, see notes 67-74 *infra* & accompanying text.

Court's holding in *Chemehuevi*³⁹ was foreseeable. In *Chemehuevi* several complainants⁴⁰ sought to force the FPC to require the operators of six fossil fueled, steam-electric power plants to obtain licenses pursuant to the terms of Part I of the Federal Power Act.⁴¹ The complainants claimed that the six power plants, which would use large amounts of water from the Colorado River system for cooling purposes, were under the jurisdiction of the FPC because they were "project works" within the meaning of section 4(e). The complainants also maintained that at least two of the plants would use "surplus water" from a government dam.⁴² The Court rejected the complainants' initial argument, indicating that the court of appeals⁴³ was correct in its holding that the project works clause of section 4(e), though not limited on its face to hydroelectric projects, could not properly be construed as giving the FPC licensing jurisdiction over steam plants.⁴⁴ Although noting that the definition of

39. 420 U.S. 395 (1975).

40. The complainants included two Indian tribes, five individual Indians, and two environmental groups. *Id.* at 397 & n.1.

41. *Id.* Section 23(b) of the Federal Power Act provides:

It shall be unlawful for any person, State, or municipality, for the purpose of developing electric power, to construct, operate, or maintain any dam, water conduit, reservoir, power house, or other works incidental thereto across, along, or in any of the navigable waters of the United States, or upon any part of the public lands or reservations of the United States (including Territories), or utilize the surplus water or water power from any Government dam Any person, association, corporation, State, or municipality intending to construct a dam or other project works across, along, over, or in any stream or part thereof, other than those defined in this chapter as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States shall before such construction file declaration of such intention with the Commission, whereupon the Commission shall cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction, such person, association, corporation, State, or municipality shall not construct, maintain, or operate such dam or other project works until it shall have applied for and shall have received a license under the provisions of this chapter. If the Commission shall not so find, and if no public lands or reservations are affected, permission is granted to construct such dam or other project works in such stream upon compliance with State laws.

16 U.S.C. § 817 (1970).

42. 420 U.S. at 398. The FPC had dismissed the complaint for lack of jurisdiction. *Id.* at 398-99, citing *Chemehuevi Tribe of Indians*, 46 F.P.C. 1126, 1127 (1971).

43. *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207 (1973), *vacated on other grounds*, 420 U.S. 395 (1975).

44. 420 U.S. at 412.

"project" in the Act⁴⁵ referred to structures that could be found at both hydroelectric and steam-electric generating plants, the Court concluded the legislative history and administrative interpretation of the project works clause established that the FPC's licensing jurisdiction extended only to hydroelectric plants.⁴⁶

The Supreme Court also rejected the complainants' contention, accepted by the court of appeals, that the surplus water clause authorized the FPC to license the use of surplus water from a government dam for purposes other than the generation of water power.⁴⁷ As the Court noted:

Nothing in the record of the debates indicates that Congress intended the surplus water clause to create an exception to the limited scope and purpose of the Act or that it viewed that clause as embodying a meaning different from that of the virtually identical surplus water provisions contained in earlier legislative proposals.⁴⁸

The Court specifically disagreed with the court of appeals' conclusion that Congress, through the use of surplus water clauses, traditionally had empowered government officials to lease surplus water from federal water projects for a variety of non-power purposes.⁴⁹ The Court also rejected the appellate court's conclusion that be-

45. 16 U.S.C. § 796(12) provides that "'project works' means the physical structures of a project." 16 U.S.C. § 796(11) provides that:

'[P]roject' means the complete unit of improvement or development, consisting of a power house, all water conduits, all dams and appurtenant works and structures (including navigation structures) which are a part of said unit, and all storage, diverting, or forebay reservoirs directly connected therewith, the primary line or lines transmitting power therefrom to the point of junction with the distribution system or with the interconnected primary transmission system, all miscellaneous structures used and useful in connection with said unit or any part thereof, and all water-rights, rights-of-way, ditches, dams, reservoirs, lands, or interest in lands the use and occupancy of which are necessary or appropriate in the maintenance and operation of such unit.

46. 420 U.S. at 405. For a review of the history of the Federal Water Power Act, see notes 13-21 *supra* & accompanying text.

47. 420 U.S. at 413.

48. *Id.* at 419.

49. *Id.* at 420 n.26. Although the Court agreed with the appellate court that Congress periodically had given various governmental officials plenary power to contract for the use of water stored in federal reservoirs, the Court recognized that those broad grants of power were given by statutory language much more specific and unambiguous than the terms of the surplus water clause contained in the Federal Power Act. *Id.* See, e.g., Boulder Canyon Project Act, 43 U.S.C. §§ 617-17u (1970), which provides that "[t]he Secretary of the Interior is . . . authorized . . . to contract for the storage of water in said reservoir and for the delivery thereof . . . for irrigation and domestic uses . . ." *Id.* § 617(d).

cause the Federal Water Power Act had repealed the authority of the Waterways Commission,⁵⁰ the FPC automatically had become vested with the planning and coordinating responsibilities formerly belonging to that body.⁵¹

Although both the courts and the FPC have construed the FPC's authority to include only the licensing of hydroelectric plants, such consistency of interpretation is not evident in other questions concerning the Commission's jurisdiction. Specifically, since 1920 certain statutory enactments and court decisions have enlarged the FPC's power to regulate hydroelectric projects previously outside the Commission's control. Until 1935 the FPC derived its licensing authority from the Federal Water Power Act.⁵² As noted earlier, the legislative history of the Act indicated that it was designed to promote the development of hydroelectric power while maintaining the navigability of the nation's waterways and promoting the development of the country's public lands and reservations.⁵³ Consequently, the FPC construed its licensing authority as applying only when a hydroelectric plant was involved in the proposed project and when the plant affected navigable waters or was located on public lands or reservations.⁵⁴ A hydroelectric plant could affect navigable water either by being located upon a navigable river or by being situated on a nonnavigable tributary and utilizing water in a manner that altered the flow of a navigable stream.⁵⁵ In the latter situation, the FPC could exercise its licensing jurisdiction only if the plant owner filed with the FPC a declaration of intent to construct a dam and if an investigation by the Commission revealed that the power plant's operations would affect interstate commerce.⁵⁶ If the owner did not

50. Federal Water Power Act, ch. 285, § 29, 41 Stat. 1077 (1920) (current version at 16 U.S.C. § 823 (1970)). The Rivers and Harbors Act of 1917, ch. 49, § 18, 40 Stat. 269, created a Waterways Commission and vested it with the investigatory authority "to formulate and report to Congress, as early as practicable, a comprehensive plan or plans for the development of waterways and the water resources of the United States for the purposes of navigation and for every useful purpose" *Id.*

51. 420 U.S. at 420. The Court stated that the primary purpose for repealing the Waterways Commission's authority was to avoid possible conflicts between it and the FPC. *Id.* See 58 CONG. REC. 2250-51 (1919) (remarks of Rep. Anderson).

52. See notes 22-24 *supra* & accompanying text.

53. See notes 14-21 *supra* & accompanying text.

54. 1 FPC ANN. REP. 51-52, 155-56 (1921).

55. *Id.* at 52.

56. *Id.* at 52-53. Section 23 of the Federal Water Power Act, ch. 285, § 23, 41 Stat. 1075 (1920), contained the provision for voluntary declarations of intent if the power plant was to be located upon a nonnavigable tributary to a navigable river.

file a declaration of intent, the FPC had no jurisdiction to license the construction of the power plant.⁵⁷

The FPC's statutory licensing jurisdiction was increased by Congress in 1935 when the Federal Water Power Act was amended and made Part I of the Federal Power Act.⁵⁸ The new law required that a declaration of intent be filed with the FPC by all owners of proposed hydroelectric projects that would be located on either navigable waterways or nonnavigable tributaries to navigable streams.⁵⁹ In the case of projects located on nonnavigable tributaries, however, the Federal Power Commission could license only those projects affecting interstate commerce.⁶⁰ Because the FPC itself had interpreted its authority as limited to licensing projects having an impact upon navigable water,⁶¹ the scope of the FPC's jurisdiction under the Federal Power Act initially remained the same as it had been under the Federal Water Power Act.

In 1940, the Court of Appeals for the Fourth Circuit held that the FPC had been correct in its interpretation of its licensing jurisdiction.⁶² The Supreme Court subsequently reversed the appellate court's decision but did so without reaching the interstate commerce issue.⁶³ The need to resolve the issue of exactly which hydroelectric plants required a Federal Power Commission license became crucial when the Supreme Court in *First Iowa Hydro-Electric Cooperative v. FPC*⁶⁴ held that an applicant who was required to obtain a license from the FPC did not have to obtain a state permit for the project.⁶⁵ Unfortunately, the Court's decision did not indicate clearly the circumstances under which an applicant was required to obtain an FPC license. The Court's statements could be construed as supporting either the view that a license was required only when a project affected a navigable waterway or the view that

57. 1 FPC ANN. REP. 53 (1921).

58. Act of Aug. 26, 1935, ch. 687, tit. II, 49 Stat. 838 (codified in scattered sections of 16 U.S.C.).

59. *Id.* at § 23(b) (current version at 16 U.S.C. § 817 (1970)). For pertinent text of section 23(b), see note 41 *supra*.

60. *Id.* For pertinent text of provision, see note 41 *supra*.

61. See, e.g., *California Ore. Power Co.*, 13 F.P.C. 1, 3 (1954) (dictum); 42 FPC ANN. REP. 23 (1962).

62. *United States v. Appalachian Elec. Power Co.*, 107 F.2d 769, 793, 797 (4th Cir. 1939), *rev'd on other grounds*, 311 U.S. 377 (1940).

63. 311 U.S. 377, 419 (1940).

64. 328 U.S. 152 (1946).

65. *Id.* at 170, 182.

a license was required whenever a project affected any aspect of interstate commerce.⁶⁶

In *FPC v. Union Electric Co.*⁶⁷ the Court enlarged the category of hydroelectric power plants that previously had been required to obtain licenses from the FPC.⁶⁸ *Union Electric* involved a pumped-storage plant⁶⁹ located upon a nonnavigable tributary to a navigable river. Although the plant's operations would have had no effect upon the navigability of the mainstream, the Court held that an FPC license was required because the plant would generate electricity for interstate transmission.⁷⁰ The Court appeared to recognize three criteria that must be satisfied before the FPC could exercise its authority to license a hydroelectric project not located on public lands or reservations. First, the proposed power plant must be located upon waters over which Congress had authority to regulate commerce;⁷¹ second, the plant must have some impact upon interstate commerce;⁷² and third, the facility must utilize the "power potential in water."⁷³ Although the Court did not define what type of plants used the power potential in water, it did state that "the distinction between a hydroelectric project and a steam plant is obvious, and meaningful."⁷⁴ This statement and the Court's requiring the licensing of a pumped-storage plant imply that the Court considered that the power potential in water was utilized only when a project produced electricity by using falling water.

*Chemehuevi Tribe of Indians v. FPC*⁷⁵ provides support for this

66. *Id.* at 170-71 & n.17, 180-81 & n.23.

67. 381 U.S. 90 (1965).

68. See text accompanying note 61 *supra*. Although the FPC had ordered the power plant in *Union Electric* to obtain a license, *Union Electric Co.*, 27 F.P.C. 801, 809 (1962), commentators have recognized that the Supreme Court's decision vested the FPC with licensing authority never before acknowledged by the Commission. See 51 IOWA L. REV. 509, 512 (1966); 44 TEX. L. REV. 790, 791 (1966). The FPC itself has recognized that because of the Supreme Court's decision in *Union Electric* the Commission's licensing authority was increased. 49 FPC ANN. REP. 25 (1969).

69. A pumped-storage plant uses electricity generated from other sources, usually fossil fueled plants, to pump water to an elevated storage pool. During periods of high electricity demand, the water is released from the elevated pool in a manner that enables the falling water to generate electricity as in other hydroelectric projects. 1 FPC, NATIONAL POWER SURVEY 120-21 (1964).

70. 381 U.S. at 94.

71. *Id.* at 97.

72. *Id.* at 94, 95.

73. *Id.* at 110.

74. *Id.*

75. 420 U.S. 395 (1975).

conclusion. There the petitioners asserted that six steam-electric plants utilized the power potential in water by using water for cooling purposes.⁷⁶ The court of appeals⁷⁷ not only rejected this contention, but also indicated that the power potential in water was not used even when the water was heated to create steam for purposes of generating electricity.⁷⁸ The appellate court also rejected the contention that the evaporation of approximately two percent of the average annual flow from the Colorado River, which would be caused by the plants' cooling facilities, would amount to a use of the power potential in water.⁷⁹ The court indicated that decreasing the amount of water available for downstream power generation was not equivalent to using the water's power potential.⁸⁰

In addition to the FPC's expanded authority to license hydroelectric plants,⁸¹ the scope of the Commission's licensing authority also has increased. This increase in the Commission's authority can be traced at least partially to the fuller exercise of power already possessed by the Commission. For example, section 10(a) of Part I of the Federal Power Act⁸² authorizes the Commission to require that hydroelectric projects be used for recreational or other beneficial purposes. Although section 10(a) delineates a comprehensive set of criteria and functions to be considered by the FPC when making its decision to license a hydroelectric plant, the Commission for many years focused only on its duty to develop water power.⁸³ In the 1950's and 60's, however, prompted both by its own initiative and by the initiative of the federal courts, the FPC began to exercise more fully its statutory duties under section 10(a).⁸⁴ Crucial to this develop-

76. *Id.* at 423. For a statement of the facts in *Chemehuevi*, see notes 40-42 *supra* & accompanying text.

77. *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207 (D.C. Cir. 1973), *vacated on other grounds*, 420 U.S. 395 (1975).

78. *Id.* at 1232. The appellate court rejected the argument that the use of cooling water involved the use of the water's power potential even though cooling water is necessary to increase the efficiency of the generating process in a thermal electric plant. *Id.* at 1232 n.128.

79. *Id.* at 1214. *Cf.* 420 U.S. at 423 n.29.

80. 489 F.2d at 1232. *Cf.* 420 U.S. at 423.

81. By 1964, the FPC had licensed 76 percent of the conventional, nonfederal hydroelectric capacity in the United States. 1 FPC, NATIONAL POWER SURVEY 101 (1964).

82. 16 U.S.C. § 803(a) (1970). For text of provision, see note 36 *supra*.

83. See, e.g., *Portland Gen. Elec. Co.*, 10 F.P.C. 445 (1951); *City of Tacoma, Wash.*, 10 F.P.C. 424 (1951).

84. See, e.g., *Udall v. FPC*, 387 U.S. 428, 449-50 (1967) (remanded to Commission to explore, *inter alia*, benefits of deferring proposed construction of water power project); *Scenic Hudson Preservation Conference v. FPC*, 354 F.2d 608, 612 (2d Cir. 1965), *cert. denied*, 384 U.S. 941 (1966) (Commission must explore alternatives to construction of proposed project);

ment was the decision by the Court of Appeals for the Second Circuit, *Scenic Hudson Preservation Conference v. FPC*,⁸⁵ in which the court ruled that section 10(a) required the FPC to evaluate the alternatives to a proposed hydroelectric facility before issuing a license for the power plant.⁸⁶

Congress also has been active in its efforts to increase the scope of the FPC's licensing authority over hydroelectric power plants. In 1968, section 15 in Part I of the Federal Power Act was amended⁸⁷ to provide the FPC with explicit statutory authority to license the use of project works for nonpower purposes.⁸⁸ With the passage of the National Environmental Policy Act (NEPA)⁸⁹ in 1969, Congress required that the FPC, as well as all other federal agencies, consider environmental factors when making decisions and prepare environmental impact statements analyzing both the effects of and the alternatives to these decisions.⁹⁰

Public Util. Dist. No. 1, 32 F.P.C. 444, 450-51 (1964) (concurring opinion) (refusal to license project that would have detrimental impact on fisheries); Puget Sound Power & Light Co., 28 F.P.C. 718, 721 (1962) (required modification of project facilities to protect fishways); Namekagon Hydro Co., 12 F.P.C. 203, 208 (1953), *aff'd*, 216 F.2d 509 (7th Cir. 1954) (denied application for license for proposed project that would be detrimental to recreational uses of stream).

85. 354 F.2d 608 (2d Cir. 1965), *cert. denied*, 384 U.S. 941 (1966).

86. *Id.* at 612, 624-25.

87. 16 U.S.C. § 808(b) (1970), *amending* 16 U.S.C. § 808 (1964).

88. *Id.* Two writers have suggested that the amendment of section 15 demonstrated that Congress intended the FPC's jurisdiction to include non-power water uses. Walker & Cox, *Jurisdiction of the Federal Power Commission Over Non-Power Water Uses*, 5 LAND & WATER L. REV. 66, 75 (1970). They advocated therefore that the surplus water clause in section 4(e) of the Federal Power Act, 16 U.S.C. § 797(e) (1970), be construed to provide the FPC with jurisdiction to license the use of surplus water for non-power purposes. Walker & Cox, *supra*, at 75. The Supreme Court rejected this argument in *Chemehuevi*, 420 U.S. at 413. See notes 47-51 *supra* & accompanying text.

89. 42 U.S.C. §§ 4521-47 (1970).

90. Section 102 of the National Environmental Policy Act of 1969 provides in pertinent part:

(2) all agencies of the Federal Government shall—

(A) utilize a systematic, inter-disciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment;

...

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

Although both Congress and the courts have been willing to extend the jurisdiction of the FPC in relation to hydroelectric facilities, neither has been willing to extend the Commission's licensing jurisdiction to include steam-electric plants. In *Chemehuevi* the Supreme Court stated that Congress would have to amend Part I of the Federal Power Act in order to provide the FPC with licensing jurisdiction over steam plants.⁹¹ In 1962 the FPC had proposed that Congress extend the Commission's licensing jurisdiction to include the licensing of cooling-water diversion facilities constructed on navigable waters in connection with steam-electric plants.⁹² Although the FPC's proposals would have enabled it to license only diversion facilities and would not have given the Commission comprehensive licensing authority over steam plants,⁹³ Congress failed to approve the Commission's recommendations. More recently, the FPC proposed that Congress adopt comprehensive electric power plant siting legislation that would protect the environment effectively while providing for additional power plants to meet the expected future growth in electric energy demand.⁹⁴ Although Congress has considered several plant-siting proposals,⁹⁵ none has been enacted into law, and licensing jurisdiction for steam-electric plants has been exercised primarily by the states.⁹⁶

Several difficulties inhere in state regulation of steam-electric plants. One is that state officials need not heed the provisions of the National Environmental Policy Act in their decision-making.⁹⁷ An-

(iii) alternatives to the proposed action,

(iv) the relationship between local shortterm uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved.

42 U.S.C. § 4332 (1970).

91. 420 U.S. at 424.

92. 42 FPC ANN. REP. 12-13 (1962). See 46 FPC ANN. REP. 8-9 (1966); 44 FPC ANN. REP. 10-11 (1964).

93. See, e.g., 46 FPC ANN. REP. 9 (1966); 42 FPC ANN. REP. 13 (1962).

94. See, e.g., 52 FPC ANN. REP. 7 (1972); 48 FPC ANN. REP. 5 (1968).

95. For a discussion of the different types of legislative siting proposals, see Journey, *Power Plant Siting - A Road Map of the Problem*, 48 NOTRE DAME LAW. 273, 285-92 (1972).

96. See note 121 *infra*.

97. See note 90 *supra* & accompanying text.

other is that state regulation often is not designed to provide adequate environmental analysis of proposed steam plants.⁹⁸ In addition, it is difficult to develop comprehensive nationwide or even regional plans at the state level.

The federal government, however, has not abandoned all jurisdiction over fossil fueled electric power plants. In fact, a large percentage of steam plants are required to obtain some sort of federal authorization.⁹⁹ Federal approval is required, however, only when a steam plant incidentally comes within the jurisdiction of some federal agency. In such situations, the review of the steam plant normally is not comprehensive; federal authorization is needed only for that portion of the fossil fueled plant within the jurisdiction of the federal agency.¹⁰⁰ Commentators have suggested that such federal control only adds to the fragmentation and complexity of licensing procedures.¹⁰¹

A typical example of required federal approval is the Corps of Engineers permit which must be obtained before a steam plant's cooling-water intake and outfall structures can be constructed on a navigable waterway.¹⁰² Although one author has suggested that an environmentally unsound power project might be attacked collaterally at a hearing held to determine whether or not to issue such a permit,¹⁰³ the Corps usually limits its inquiry to an analysis only of

98. For a discussion of problems encountered by states in their steam-electric plant siting policies, see sources cited in note 121 *infra*.

99. Ramey & Murray, *supra* note 30, at 35. In 1967, from a total of twelve newly constructed fossil fueled plants which possessed a capacity of 400MW or larger, eight were required to obtain some type of federal permission. 115 CONG. REC. 29053 (1969) (remarks of Senator Muskie).

100. For examples of different federal regulations affecting steam plants, see *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207, 1233, (D.C. Cir. 1973), *vacated on other grounds*, 420 U.S. 395 (1975).

101. Tarlock, Tippy, & Francis, *supra* note 30, at 505.

102. Section 10 of the Rivers and Harbors Act of 1899 provides in pertinent part: The creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is prohibited; and it shall not be lawful to build or commence the building of any . . . structures in any . . . navigable river, or other water of the United States . . . except on plans recommended by the Chief of Engineers and authorized by the Secretary of the Army . . .

33 U.S.C. § 403 (1970). Of the eight steam plants requiring federal approval in 1967, seven of those facilities required permits from the Corps of Engineers. 115 CONG. REC. 29053 (1969) (remarks of Senator Muskie).

103. Casto, *The Use of the Corps of Engineers Permit Authority as a Tool for Defending the Environment*, 11 NATURAL RESOURCES J. 1, 19-20 (1971).

the structures to be constructed upon the navigable river.¹⁰⁴

The Federal Water Pollution Control Act Amendments of 1972 (FWPCA)¹⁰⁵ and the Air Quality Act of 1967 as amended in 1970¹⁰⁶ have created indirect controls over the licensing of steam-electric plants. The FWPCA authorizes the Administrator of the Environmental Protection Agency to establish maximum pollution levels for a large number of substances, including thermal discharges from steam-electric power plants that may be discharged into navigable waters.¹⁰⁷ A potential polluter who might make discharges into navigable waters must obtain a permit from the appropriate EPA-approved state agency or, in the absence of an approved state agency, from the EPA itself.¹⁰⁸ Thus, although the federal government has not required a comprehensive environmental analysis of steam-electric plants, it has provided a mechanism by which some of the adverse effects of thermal discharges by steam plants can be avoided. Similarly, under the Air Quality Act, the EPA is authorized to promulgate primary and secondary ambient standards for several types of air pollutants,¹⁰⁹ and the states, through EPA-

104. See Tarlock, Tippy, & Francis, *supra* note 30, at 522 n.89. The District Engineer only will prepare an environmental impact statement if the proposed activity or work requiring authorization, that is, the intake and outfall structures of the plant, is found to affect significantly the quality of the environment. 33 C.F.R. § 209.120(i)(1)(iv) (1976). If the District Engineer determines that an environmental impact statement is required, the scope of the impact statement only will be expanded to cover the entire electrical plant if the project has not been subjected to regulatory controls by other state or federal officials. 33 C.F.R. § 209.120(l) (3)(ii) (1976). The Corps of Engineers' authority to review the environmental impact of proposed structures was restricted further by section 511 of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA). 33 U.S.C. § 1371 (Supp. II, 1972). Part (a)(2)(B) of section 511 of the Act does not purport to impair the authority of the Secretary of the Army under section 10 of the Rivers and Harbors Act of 1899. 33 U.S.C. § 1371 (a)(2)(B) (Supp. II, 1972). In its environmental review of proposed structures, however, the Corps will not be able either to review the pollution standards authorized under section 401 of the FWPCA, 33 U.S.C. § 1341 (Supp. II, 1972), or to impose, as a condition to issuing its permit, stricter pollution standards than those authorized under the FWPCA. 33 U.S.C. §§ 1371(b)(2)(A)-(B) (Supp. II, 1972).

105. 33 U.S.C. §§ 1251-376 (Supp. II, 1972).

106. 42 U.S.C. §§ 1857-571 (1970).

107. See 33 U.S.C. §§ 1312(b)(1)-(2) (Supp. II, 1972). The FWPCA defines "heat" to be a pollutant, 33 U.S.C. § 1362(6) (Supp. II, 1972), and determines that "steam-electric power plants" are a source of pollution for which the Administrator is required to promulgate levels of maximum pollution discharge. 33 U.S.C. §§ 1316 (b)(1)(A)-(B) (Supp. II, 1972). See 40 C.F.R. §§ 423.15(1)-(6) (1976) for steam-electric plant heat discharge regulations.

108. See 33 U.S.C. § 1342 (Supp. II, 1972), which creates the National Pollutant Discharge Elimination System.

109. 42 U.S.C. §§ 1857c-4(a)(1)(A)-(B) (1970). A primary ambient standard is placed at a level necessary to protect public health. *Id.* § 1857c-4(b)(1). A secondary ambient standard

approved programs, are empowered to enforce these pollution standards.¹¹⁰

MODERN DEVELOPMENT AND PRESSURES

Chemehuevi establishes that the Supreme Court agrees with both Congress and the FPC that the FPC's licensing jurisdiction under Part I of the Federal Power Act does not extend to steam-electric plants. Recent developments indicate, however, that the FPC, Congress, and the courts need to redetermine the statutory licensing authority of the Federal Power Commission.

Although the total percentage of the nation's electricity produced by steam-electric plants has risen only by 10 percent between 1920 and 1971,¹¹¹ the overall increase in the demand for electrical energy, combined with improved technology, has necessitated the construction of a substantial number of additional electrical generating plants possessing much larger production capacities than those facilities constructed in earlier years.¹¹² Because of their greater number and larger size, steam-electric plants of today affect the environment more significantly than did early twentieth century thermal generating projects. For example, in 1920, only one hundred seventy-eight million gallons of cooling water were used per day by steam plants, but in 1971, steam plants used over one hundred twenty billion gallons of cooling water each day.¹¹³ The amount of

is that level of air pollution which will not be detrimental to the public welfare. *Id.* § 1857c-4(b)(2). For national primary and secondary ambient air quality standards for sulfur oxides, particulate matter, and nitrogen dioxide, see 40 C.F.R. §§ 50.3-.7, .10-.11 (1976).

110. See 42 U.S.C. § 1857c-5 (1970). Commentators have suggested that there is no adequate technology to control the emissions of sulfur oxides and nitrogen oxides created in the combustion processes at steam-electric power plants. N. FABRICANT & R. HALLMAN, *supra* note 5, at 83-84. The drafters of the Air Quality Act predicted this lack of technology, however, and included in the Air Quality Act liberal provisions permitting postponements and extensions if a state has difficulty meeting the EPA-promulgated national ambient standards. See, e.g., 42 U.S.C. §§ 1857c-5(e)-(f) (1970).

111. See *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207, 1232 & n.130 (D.C. Cir. 1973), *vacated on other grounds*, 420 U.S. 395 (1975) and 1 FPC, NATIONAL POWER SURVEY 63 (1964), *citing* EDISON ELECTRIC INSTITUTE, STATISTICAL YEAR BOOK OF THE ELECTRIC UTILITY INDUSTRY FOR 1971, at 2, 18-19 (No. 39, Pub. No. 72-25, Oct. 1972).

112. From 1920 to 1965 the maximum turbine rating of the generating plants in the United States increased from 60 to 1,000 Megawatts (MW). 1 FPC, NATIONAL POWER SURVEY 14 (1964). One MW is equal to 1000 kilowatts. N. FABRICANT & R. HALLMAN, *supra* note 5 at 1. According to some estimates, assuming plant sizes increase to 2000 MW, in the years between 1970 and 1990, ninety-one new fossil fueled plants and 164 new nuclear plants will be constructed. Ramey & Murray, *supra* note 30, at 34 & n.40.

113. *Chemehuevi Tribe of Indians v. FPC*, 489 F.2d 1207, 1229-30 n.111 (D.C. Cir. 1973), *vacated on other grounds*, 420 U.S. 395 (1975).

cooling water used daily in 1971 was equal to approximately ten percent of the average daily runoff in the continental United States.¹¹⁴ The significance of these statistics becomes apparent when one realizes that in 1970 about eighty percent of the thermal-electric generating plants utilized a once-through steam condensation system which discharged the cooling water, after it had absorbed the waste heat in the condensor, into the original water source.¹¹⁵ Such extensive use of this process creates the possibility that many of the nation's waterways will be affected by thermal pollution.¹¹⁶ If the cooling water used by these plants is not discharged immediately into the original source, environmental damage still results because large quantities of water are lost due to evaporation.¹¹⁷ In addition to waste heat problems, modern steam plants using fossil fuel create large quantities of air pollutants.¹¹⁸

Not only is there a definite need for a comprehensive, environmentally sound thermal electric generating plant siting policy, but also there is a need for a more efficient and less complicated procedure for obtaining authorization to construct a steam plant.¹¹⁹ Unlike hydroelectric and nuclear power plants, no federal license is required for steam plants.¹²⁰ Approval for the construction of a

114. N. FABRICANT & R. HALLMAN, *supra* note 5, at 52. Because of expected growth in the production of thermal electric power, Fabricant and Hallman estimate that the cooling water requirements of thermal electric plants (both nuclear and fossil fueled) will rise to 200 billion gallons per day by 1980 and to 600 billion gallons per day, or one-half of the nation's average daily water runoff, in the year 2000. *Id.* at 53. Much of this projected growth in the future demand for cooling water will be because of heavier reliance upon nuclear power plants which require 50 percent more cooling water than fossil fueled plants. *Id.* at 6.

115. For a brief discussion of the processes through which a thermal electric plant produces electricity, see note 5 *supra*.

116. Thermal discharges can severely damage aquatic ecosystems. See, e.g., N. FABRICANT & R. HALLMAN, *supra* note 5, at 53-54; Comment, *Thermal Electric Power and Water Pollution: A Siting Approach*, 46 IND. L.J. 61, 65-70 (1970) [hereinafter cited as *Thermal Electric Power*].

117. *Thermal Electric Power*, *supra* note 116, at 71 n.25.

118. N. FABRICANT & R. HALLMAN, *supra* note 5, at 15-16. In 1970, steam-electric plants were accountable for 50 percent of all the sulfur oxides, 25 percent of all the nitrogen oxides, and 25 percent of all the particulate matter discharged into the nation's air. *Id.* at 15.

119. See, e.g., Ramey & Murray, *supra* note 30, at 31-35; Tarlock, Tippy, & Francis, *supra* note 30, at 568.

120. See, e.g., Ramey & Murray, *supra* note 30, at 35. The FPC is authorized to license hydroelectric projects located along any of the waters over which Congress has jurisdiction under its authority to regulate commerce. 16 U.S.C. § 797(e) (1970). For the relevant text of § 797(e), see note 23 *supra*. The Commission is authorized to issue licenses only for water-power projects that conform to a comprehensive waterway development plan. 16 U.S.C. § 803(a) (1970). For the pertinent provisions of § 803(a), see note 36 *supra*. The newly-created

steam plant presently must be obtained from various state and federal government agencies. Often no single agency determines the suitability of a proposed project as a whole.¹²¹

NEW DEVELOPMENTS IN COMMISSION CONTROL OF STEAM-ELECTRIC POWER PLANTS

Despite a history hostile to comprehensive federal regulation of steam-electric plants, the FPC in *Sierra Club*¹²² recently responded to pressures to expand its authority in this area. In *Sierra Club* the Commission authorized the construction of a coal-fired, steam-electric power plant known as Gerald Gentleman Station by amending the license to FPC hydroelectric Project No. 1835,¹²³ known as Sutherland Reservoir. The FPC authorized the construction of the plant only after making a comprehensive environmental analysis; the recommendations made as a result of this analysis were reported in the Initial Decision,¹²⁴ which was adopted with modifications as the decision of the Commission.¹²⁵ This comprehensive review of Gentleman Station was not typical of the environmental analysis

Nuclear Regulatory Commission, 42 U.S.C.A. § 5841(a) (Supp. I, 1975), exercises licensing authority over nuclear-powered plants. 42 U.S.C. § 2133(a) (1970).

121. For a discussion of the types of federal controls exercised in relation to the construction and operation of a steam plant, see notes 99-110 *supra* & accompanying text. In recent years, the tendency has been for a larger number of states to require licenses for the construction of new steam electric plants. *Compare* Journey, *supra* note 95, at 284, with Smith, *Electricity and the Environment—the Generating Plant Siting Problems*, 26 BUS. LAW. 169, 171 (1970). Although an increasing number of states now consider the environmental impacts of proposed steam plants in the certification process, the review often is inadequate because strict standards have not been imposed. Tarlock, Tippy, & Francis, *supra* note 30, at 548-51. Furthermore, individual state certification of electric power generating sites is not the most effective means of achieving the efficient use and the coordinated development of the nation's resources Congress contemplated in sections 2(a) and 2(b) of the Energy Reorganization Act of 1974. 42 U.S.C.A. §§ 5801(a)-(b) (Supp. I, 1975).

122. 10 FED. POW. SERV. (MB) 5-32.1 (FPC 1976).

123. *Id.* at 5-32.15-.16. Article 28 of the amended license for Project No. 1835 provides:

The licensee is authorized to construct, operate and maintain a coal-fired steam electric generating plant . . . on lands and waters of the Project, which plant may have not more than two generating units each of which may have a rated capacity not to exceed 650 MW . . . and, in connection therewith, to withdraw from the Project waters not more than 1,250 cfs for condensor cooling purposes and other plant purposes, subject to the terms and conditions of the license, the provisions of the Federal Power Act and the rules and regulations of the Federal Power Commission thereunder.

Id.

124. *Sierra Club*, No. E-8492, slip op. at 10-36 (F.P.C. March 19, 1976), *adopted with modifications*, 10 FED. POW. SERV. (MB) 5-32.1 (FPC 1976).

125. 10 FED. POW. SERV. (MB) at 5-32.15.

usually made when a proposed steam plant is within the jurisdiction of a federal agency.¹²⁶ Neither the Initial nor the final decision attempted to define clearly the limits of the FPC's authority to review the environmental soundness of a steam plant. An examination of the facts and language used in the two decisions, however, is helpful in determining the ultimate impact of the FPC proceedings in *Sierra Club* on the construction of future steam plants.

Sierra Club involves the construction of Gentleman Station next to Project No. 1835.¹²⁷ The major facilities for Gentleman Station are located outside of the boundary to Project No. 1835. Several structures to be used in connection with supplying and discharging the plant's cooling water, however, are located within the boundary to the project.¹²⁸ The station is designed to use a once-through condensation system which will both obtain fresh water from and discharge the used cooling water into Sutherland Reservoir.

Despite a Commission warning to the Nebraska Public Power District (NPPD) that it would need FPC permission to use Project No. 1835's waters and lands for steam-electric generation purposes, NPPD began construction without authorization. In November, 1973, the *Sierra Club* filed a complaint alleging that the construction of Gentleman Station violated the license for Project No. 1835, the Federal Power Act, and FPC regulations.¹²⁹ Thereafter, NPPD

126. See notes 99-104 *supra* & accompanying text.

127. Project No. 1835 first was licensed by the FPC in 1943. Platte Valley Pub. Power & Irrigation Dist., 3 F.P.C. 947, 950 (1943).

128. The facilities of Gentleman Station located within the boundary of Project No. 1835 include a "meteorology tower, three intake canals, a mixing basin, pumping facilities, three dikes, portions of the discharge canal, the auxiliary cooling area and the outlet channel." 10 FED. POW. SERV. (MB) at 5-32.14. Nebraska Public Power District (NPPD) proposed that the boundary to the Project be revised to exclude all Gentleman Station facilities from the Project lands except the "meteorology tower, two intake canals, the dikes, the auxiliary cooling area and the outlet channel" *Id.* Although the Commission rejected the proposed boundary modification, *id.*, it did provide, in Article 38 to the amended license, that NPPD could propose an alternative plan for revision of the Project boundary. *Id.* at 5-32.18.

129. The license for Project No. 1835 provides in part:

(i) Before starting the construction of any works related to the project, whether included in the license or not, which are not now constructed, the licensee shall file an application for approval of the plans therefor and for amendment of license to include such works therein; and the licensee shall not start the construction of any such works until the Commission shall have approved the plans therefor and shall have authorized the amendment of license

3 F.P.C. at 950. Section 10(b) of Part I of the Federal Power Act provides that "no substantial alteration or addition not in conformity with the approved plans shall be made to any dam or other project works . . . without the prior approval of the Commission" 16 U.S.C. § 803(b) (1970). FPC Regulations provide:

filed an application seeking FPC authorization for the use of the lands and waters of Project No. 1835 and also proposed that the boundary for the project be revised so as to remove most of Gentleman Station's structures from within project lands.

In October 1974, the FPC stated that the construction of Gentleman Station facilities within the project boundary and the use of project waters for cooling purposes together constituted a substantial alteration or addition to Project No. 1835 that necessitated both environmental review and approval by the Commission.¹³⁰ For, under section 10(b) of Part I of the Federal Power Act, any substantial alterations in a project require prior Commission approval.¹³¹ Moreover, a similar requirement had been written specifically into the license to Project No. 1835.¹³² The FPC, accordingly, ordered NPPD to cease and desist construction of Gentleman Station structures located within the project boundary.¹³³ In May, 1975, the FPC denied a motion by Sierra Club either to extend the cease and desist order to the parts of Gentleman Station located outside of Project 1835 or to revise the project boundary so as to include the total steam-electric plant.¹³⁴ Six months earlier, however, the Commission had rejected NPPD's contention that because the steam plant was not related to Project No. 1835, NPPD could not be forced to comply with Commission regulations that might require an environmental impact analysis of Gentleman Station.¹³⁵

Where a licensee desires to make a change in the physical features of the project or its boundary, and/or make an addition or betterment and/or abandonment or conversion, of such character as to constitute an alteration of the license, application for an amendment of the license shall be filed with the Commission, fully describing the changes licensee desires to make.

18 C.F.R. § 5.1 (1976).

130. Sierra Club, 2 FED. POW. SERV. (MB) 5-704, 5-709-10 (FPC 1974).

131. See note 129 *supra* & accompanying text.

132. See note 129 *supra* & accompanying text.

133. 2 FED. POW. SERV. (MB) at 5-710.

134. The cease and desist order was modified in March, 1976, to permit NPPD to construct Gentleman Station facilities located within the Project boundary. 8 FED. POW. SERV. (MB) 5-667, 5-671-72 (FPC 1976).

135. 10 FED. POW. SERV. (MB) at 5-32.2. FPC regulations provide that

"[a]ll applications for . . . amendment of a license proposing construction, or operating change of a project shall be accompanied by the applicant's detailed report of environmental factors" 18 C.F.R. § 2.81(a) (1976). For FPC guidelines for the preparation of environmental reports, see 18 C.F.R. ch. 1, pt. 2, App. A (1976).

Basis of Commission Authority

Although in his Initial Decision in *Sierra Club*, Administrative Law Judge Benkin concluded that the Gerald Gentleman Station should be constructed,¹³⁶ he also concluded that the operation of the steam plant would create serious environmental risks because of possible thermal water pollution and air pollution.¹³⁷ Judge Benkin viewed the Supreme Court's decision in *Chemehuevi* as denying the FPC both the authority to exercise licensing jurisdiction over steam-electric plants and the ability to extend the existing boundaries of a hydroelectric project for the sole purpose of acquiring jurisdiction over a thermal electric plant;¹³⁸ nonetheless, he stated that the FPC had authority to protect the environment from any adverse effects created by Gentleman Station.¹³⁹ According to the judge, this authority was created because Gentleman Station would impinge directly upon, and thus substantially alter, the operations of Project No. 1835.¹⁴⁰

Gentleman Station affected Project No. 1835 in two important ways: through the construction of facilities located on project lands and through the use of project water for cooling purposes. Because the impact of the steam plant upon Sutherland Reservoir was obvious and substantial, the Commission was not compelled to define what constituted a substantial alteration or addition to a project within the meaning of section 10(b) of the Federal Power Act.¹⁴¹ In the opinion adopting with modifications Judge Benkin's Initial Decision, however, the Commission rejected the argument that the FPC would lose its jurisdiction over the steam plant if the boundaries of the hydroelectric project were changed so as to remove most of the physical structures of Gentleman Station from within the project lands.¹⁴² Apparently, therefore, as long as any structures

136. No. E-8492, slip op. at 41.

137. *Id.*

138. *Id.* at 36-37.

139. *Id.* at 40.

140. *Id.* at 2, 37.

141. 16 U.S.C. § 803(b) (1970). For relevant text of the provision, see note 129 *supra*.

142. 10 FED. POW. SERV. (MB) at 5-32.14. NPPD had attempted to remove most of the Gentleman Station facilities from within the boundary of Project No. 1835 by proposing a revised boundary for the Project. See note 128 *supra*. In the past, the FPC has amended other project licenses to remove non-hydroelectric generating facilities from within project boundaries. See, e.g., South Carolina Elec. & Gas Co., 15 F.P.C. 1544, 1545 (1956); Greenwood County, S.C., 6 F.P.C. 422, 424 (1947). NPPD apparently assumed that by removing most of the Gentleman Station facilities from within the Project boundary, although the FPC would

were located on project lands and as long as the plant continued to use project waters, the FPC could exercise authority over Gentleman Station.¹⁴³

An issue not answered by *Sierra Club* is whether the FPC could exercise authority over a steam-electric plant that interfered significantly with the operations and integrity of a water powered project but that did not have facilities located within the hydroelectric project's boundary.¹⁴⁴ A possible conclusion is that the operations of such a steam plant might alter the utilization of the hydroelectric project to such an extent that the licensee, under section 10(b) of the Federal Power Act, would be required to obtain FPC approval for a substantial alteration to the project.¹⁴⁵ The FPC thus would obtain authority over the operations of the steam plant.

Section 10(b) is not limited expressly to situations in which alterations occur as a result of activities taking place within a project's boundaries. Additionally, historical facts indicate that both Congress and the courts have been willing to construe broadly the FPC's jurisdiction in relation to hydroelectric facilities.¹⁴⁶ The FPC has adopted a similar attitude in regard to the scope of its jurisdiction. In *Sierra Club* the Commission stated that "no other agency has the responsibility, which we have under Part I of the Federal Power Act, to oversee the continued integrity of federally licensed water power projects,"¹⁴⁷ thus indicating that the FPC may be willing to exercise authority over any activity substantially altering a water power project, whether or not the activity occurred inside the boundary to the project.

lose its basis of authority over the steam plant, project water still could be utilized for cooling purposes. See 10 FED. POW. SERV. (MB) at 5-32.14. The FPC has authorized project waters to be used by steam-electric plants for cooling purposes, but it has not extended its licensing jurisdiction to authorize the construction and operation of those generating facilities. See, e.g., *Arkansas Power & Light Co.*, 40 F.P.C. 522, 524-25 (1968); *Duke Power Co.*, 36 F.P.C. 675, 686 (1966); *South Carolina Elec. & Gas Co.*, 15 F.P.C. 1544, 1545 (1956).

143. 10 FED. POW. SERV. (MB) at 5-32.14.

144. A steam plant may encroach upon a hydroelectric plant's operations if the fossil fueled plant is located so that the pollutants released into the air during the operations of the steam plant adversely affect the utilization of project lands. The steam plant also might interfere with a hydroelectric plant by being located upstream from the hydroelectric project. Because of the steam plant's use of the stream's waters for cooling purposes, the project might either suffer the effects of thermal pollution or be forced to operate with lower than normal water levels because of permanent water losses caused by the steam plant's operations.

145. 16 U.S.C. § 803(b) (1970). For pertinent text of the provision, see note 129 *supra*.

146. See notes 58-90 *supra* & accompanying text.

147. 10 FED. POW. SERV. (MB) at 5-32.11.

Nature of Commission Authority

The FPC's holding in *Sierra Club* does not accord the Commission a comprehensive power to license the construction and operation of thermal electric facilities.¹⁴⁸ In the Initial Decision, Judge Benkin viewed *Chemehuevi* as denying the FPC licensing jurisdiction over steam plants per se.¹⁴⁹ Judge Benkin did state, however, that by amending the license to a water power project the Commission properly could control the activity of a steam plant when it affected the operations of such a water power project.¹⁵⁰

When making a decision to approve any particular facility or activity of a steam plant, the Commission is required to act within the terms of both section 10(a) in Part I of the Federal Power Act¹⁵¹ and the National Environmental Policy Act of 1969 (NEPA).¹⁵² FPC regulations implementing NEPA require the Commission to prepare an environmental impact statement before approving an amendment to a project's license.¹⁵³ *Sierra Club* demonstrates that once the FPC has acquired jurisdiction over a steam plant, the Commission will not limit its environmental impact analysis to a review of those thermal electric plant activities having a direct impact upon the water power project,¹⁵⁴ but also will analyze the totality of the plant's impact upon the environment. As a result of the comprehensive nature of the FPC's review, the agency could withhold required approval of a particular steam plant facility or operation if any activity of the thermal electric plant will create a significant adverse environmental impact.¹⁵⁵ Section 10(a) of the Federal Power Act allows the Commission to authorize modifications of a water power project to institute a comprehensive plan designed both to improve or develop the navigability of waterways and to allow the use of project land for beneficial public purposes.¹⁵⁶ Before granting Commission approval, then, the FPC could insist not only that the entire steam plant be environmentally sound within the meaning of NEPA but also that the particular structure or operation requiring authori-

148. *Id.* at 5-32.10, 5-32.12.

149. No. E-8492, slip op. at 37.

150. *Id.* at 40.

151. 16 U.S.C. § 803(a) (1970). For text of provision, see note 36 *supra*.

152. 42 U.S.C. §§ 4321-47 (1970). For pertinent text of relevant sections, see note 90 *supra*.

153. 18 C.F.R. §§ 2.80-81 (1976). For pertinent text of section 2.81(a), see note 135 *supra*.

154. See No. E-8492, slip op. at 10-36.

155. 10 FED. POW. SERV. (MB) at 5-32.12-13.

156. 16 U.S.C. § 803(a) (1970). For text of provision, see note 36 *supra*.

zation will conform to any comprehensive plan developed by the Commission under the provisions of section 10(a).

Although the FPC initially may withhold required approval of an environmentally unsound steam plant that significantly encroaches upon the activities of a water power project, the FPC may not grant a conditional authorization requiring the thermal electric power plant to operate all its facilities in an environmentally safe manner.¹⁵⁷ Once the Commission has approved a thermal electric plant, it may only regulate those plant activities that directly impinge upon an FPC project.¹⁵⁸ In *Sierra Club*, for example, the Commission could order that construction of steam plant facilities located within the water power project be ceased,¹⁵⁹ but the cease and desist order could not be extended to Gentleman Station structures not located within the project boundary.¹⁶⁰ The Commission, similarly, could exercise regulatory power in relation to air pollutants emitted during a steam plant's operations only to the extent that those pollutants impinged directly upon the use of project lands.¹⁶¹ Because of its special concern with the utilization of water resources,¹⁶² however, the FPC, once having obtained a basis of authority over a thermal electric plant, can regulate the use of water by a steam plant to the extent necessary to implement a comprehensive plan to develop the nation's waterways.¹⁶³

157. See 10 FED. POW. SERV. (MB) at 5-32.11-.12.

158. *Id.* In the Initial Decision Judge Benkin contended that, because FPC approval was required for certain Gentleman Station activities, the FPC could require NPPD to take actions to protect the environment from adverse impacts caused by the construction and operation of the steam plant. No. E-8492, slip op. at 40. The Commission viewed its regulatory authority in protecting environmental values as more limited than the role envisioned by Judge Benkin. 10 FED. POW. SERV. (MB) at 5-32.10-.12.

159. 2 FED. POW. SERV. (MB) 5-704, 5-710 (FPC 1974).

160. No. E-8492, slip op. at 59.

161. 10 FED. POW. SERV. (MB) at 5-32.12.

162. See, e.g., *Chemehuevi Tribe of Indians v. FPC*, 420 U.S. 395, 407-08 (1975); *FPC v. Union Elec. Co.*, 381 U.S. 90, 98-99 (1965); *First Iowa Hydro-Electric Coop. v. FPC*, 328 U.S. 152, 180-81 (1946).

163. 10 FED. POW. SERV. (MB) at 5-32.11-.12. In the Initial Decision Judge Benkin stated that, while regulating the use of water, the Commission, for the sole purpose of abating pollution, cannot enforce more stringent water quality standards than those established or approved by the Environmental Protection Agency under the Federal Water Pollution Control Act Amendments of 1972 (FWPCA). No. E-8492, slip op. at 23, *citing*, 33 U.S.C. § 1371(2)(B) (Supp. II, 1972). Although not deciding the correctness of Judge Benkin's statement, the Commission did state that the FPC could require stricter water quality controls than those promulgated under the FWPCA if the stricter controls were necessary to enable the FPC to perform its statutory duties under Part I of the Federal Power Act. 10 FED. POW. SERV. (MB) at 5-32.11-.12.

Effects of Commission Authority

The FPC authorization for the construction of Gentleman Station did not exempt NPPD from complying with other state and federal laws regulating the construction and operation of its plant.¹⁶⁴ Thus, the FPC, despite its comprehensive environmental analysis of Gentleman Station, was only one of the many state and federal agencies from which NPPD needed to obtain approval to construct and operate the steam plant.¹⁶⁵ The Commission did imply, however, that, because of the limited authorization of Gentleman Station, it could exercise under section 202 of the Federal Power Act¹⁶⁶ its statutory duty to provide an adequate supply of electricity¹⁶⁷ and prevent other state or federal agencies from completely curtailing for environmental reasons the operation of the steam plant.¹⁶⁸ If the FPC is correct in this interpretation of its statutory jurisdiction, Commission approval of steam-electric power plants could become an especially valuable commodity for those utility owners who may not be able to comply fully with the environmental standards imposed by other federal and state agencies.

CONCLUSION

The Federal Power Commission has interpreted the Supreme Court's decision in *Chemehuevi* as denying the FPC any statutory basis for directly licensing fossil fueled, steam-electric power plants. In *Sierra Club*, however, the Commission required that a compre-

164. 10 FED. POW. SERV. (MB) at 5-32.10, 5-32.19.

165. See note 121 *supra* & accompanying text.

166. 16 U.S.C. § 824(a) (1970).

167. Section 202(a) of Part II of the Federal Power Act provides in pertinent part:

For the purpose of assuring an abundant supply of energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources, the Commission is empowered and directed to divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy, and it may at any time thereafter, upon its own motion or upon application, make such modifications thereof as in its judgment will promote the public interest.

16 U.S.C. § 824(A) (1970).

168. 10 FED. POW. SERV. (MB) at 5-32.13. The Commission may be mistaken in its interpretation of its authority under section 202(a). On its face, the provision only authorizes the FPC to establish regional districts in an attempt to promote the voluntary interconnection and coordination of electrical facilities. For the relevant text of the provision, see note 167 *supra*. The provision does not empower the FPC to prevent an authorized state or federal agency from completely curtailing the operations of an environmentally unsound steam-electric generating plant.

hensive environmental examination of a steam-electric plant be undertaken because the plant's facilities and operations substantially altered an FPC licensed water power project. If the FPC interprets its statutory authority to require Commission approval of all steam plants whose activities in any way encroach upon the operation of a project,¹⁶⁹ then many proposed thermal electric plants will be subject to FPC review.

Because even those plants subject to FPC approval may require other state and federal authorizations for their construction and operation, the need for fossil fuel electric generating plant-siting legislation still exists. The ultimate goal of such legislation should be to create a regulatory system that could deal effectively with two crucial, competing problems: the need to provide efficiently for the growing electrical demand and the need to protect the environment effectively. Although FPC review increases the complexity of the thermal electric plant authorization process, the type of comprehensive environmental analysis required in *Sierra Club* is an effective interim alternative to comprehensive plant-siting legislation. Therefore, the Commission's authority to control the development of prospective fossil fueled plants should be construed broadly.

169. See note 144 *supra*.