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INTRODUCTION

According to 1996 data, about 2,358 hydropower[1] plants currently are operating in the United States.[2] Forty-four percent of these plants are federally owned and operated; thirty-five percent are privately operated; and twenty-one percent of the plants are operated by municipalities or special purpose districts.[3] The Federal Energy Regulatory Commission (FERC) exercises exclusive licensing authority[4] over 1,600 hydropower

[1] U.S. Department of the Interior, Bureau of Reclamation, Power Resources Office, *Hydroelectric Power* (Feb. 2001). Hydropower is an energy power source generated from flowing water used to turn turbines and generators that produce electricity.

[2] Federal Energy Regulatory Commission, *Water Power – Use and Regulation of a Renewable Resource, Present Development of Hydroelectric Projects* ¶ 1, http://ferc.gov/hydro/docs/waterpwr.htm (updated Dec. 24, 2002). The latest data available on the website is from 1996.

[3] *Id.*

[4] Exclusive in the sense that state regulations that conflict with FERC licensing provisions are pre-empted by the Federal Power Act; *infra* n. 6. *See* 3 Pub. Nat. Resources L. § 21C:8 (2002).

projects[5] pursuant to the Federal Power Act (FPA).[6] The FPA requires hydropower plants to obtain a license if: (1) operating on navigable waterways or other water bodies subject to federal jurisdiction; (2) operating on federal lands, reservations, and territories; or (3) using surplus water from a federally owned or constructed dam.[7] FERC oversees approximately 1,016 licenses totaling 96% of all non-federal hydropower plants.[8] Hydropower constitutes ten percent of the nation's electric energy.[9]

All states have licensed hydropower plants within their borders with the exception of Mississippi, Delaware, North Dakota, and Hawaii.[10] Washington, California, and Oregon are the leaders in hydropower production.[11] In South Carolina, twenty-five hydropower plants are licensed by FERC.[12] These South Carolina plants are located on the Santee, Saluda, Broad, Catawba, Little, Savannah, Pacolet, Enoree, and Rocky Rivers, as well as Bad Creek, Lawson Fork, and Coneross Creek.[13] The power plants generate power by controlled water release from dammed sections of rivers and artificially created water bodies.

FERC licenses extend for a period not exceeding fifty years, after which the licensee must reapply for a new license.[14] Up until 1993, only a small number of FERC licenses expired each year. But, in 1993, an unprecedented wave of license expirations began.[15] One hundred and fifty-seven licenses expired in 1993, thirty-five licenses between 1995 and

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[5] S. Comm. On Energy and Nat'l Res., *Hearing on Electricity Generation and Transmission; Hydroelectric Relicensing Procedures*, 107th Cong. (July 19, 2001) (available at http://www.senate.gov/~energy/hearings/testimony.cfm?id=438&wit_id=1082) (statement by Mark Robinson, Dir., Office of Energy Projects, FERC).

[6] *Federal Power Act*, 16 U.S.C. §§ 792 - 828(c) (2000).

[7] 16 U.S.C. § 797(e) (2000).

[8] FERC, *supra* n. 2.

[9] *Id.*

[10] *Id.*

[11] *Id.*

[12] Federal Energy Regulatory Commission, *Hydroelectric Projects Under Commission License* (available at http://www.ferc.gov/hydro/docs/projlic.pdf) (updated Oct. 7, 2002).

[13] *Id.*

[14] 16 U.S.C. § 799 (2000).

[15] According to FERC, the large number of applications in 1993 was the result of previous Commission decisions and court decisions. *See* Federal Energy Regulatory Commission, *Water Power - Use and Regulation of a Renewable Resource, Present Development of Hydroelectric Projects* ¶ 27, http://ferc.gov/hydro/docs/waterpwr.htm (updated Dec. 24, 2002).

1999,[16] and from 2000 to 2010, two hundred and twenty licenses, or twenty percent of the United States' hydropower capacity, will expire.[17]

In South Carolina, licenses belonging to three of the top hydropower energy generators will expire within the next six years. The license for Santee Cooper's generator on the Santee River will expire in 2006. In 2007, the South Carolina Electric and Gas Company's (SCE&G's) license to operate its Lake Murray dam on the Saluda River in Newberry County will expire. In 2008, Duke Power's Catawba-Wateree license will expire.[18] Although not located in South Carolina, the Alcoa license to operate on the Yadkin-Pee Dee River will expire in 2008 as well, affecting the entire stretch of the Pee Dee River in South Carolina.[19] Relicensing proceedings will create a significant window of opportunity for the State of South Carolina, as well as environmental groups, to seek new license conditions that will reduce adverse environmental impacts of dams on these four major river systems.

The relicensing of the Alcoa, Duke, and Santee Cooper projects arise at a time of transition from an absolute acceptance of the value of dams, to a growing awareness and alarm over the environmental harms caused by dams.[20] Although hydropower is a clean, renewable power source, it exacts a heavy price on riverine ecology. According to the U.S. Geological Survey, "dams create an utter transformation of the downstream ecosystem, affecting the temperature, flow rate, and sediment load of streams."[21] Reservoirs behind dams bring extremes in water temperature, from warm surface water to chilly deep waters, which differ greatly from a relatively even temperature normally found in flowing rivers.[22] Reservoirs permanently alter normal, seasonal changes in river flow in order to generate power.[23] Dams also interfere with a river's circulation of sediment by trapping stream sediment in the reservoir and

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[16] Federal Energy Regulatory Commission, *Water Power – Use and Regulation of a Renewable Resource New Licenses (Relicenses)*, http://ferc.gov/hydro/docs/waterpwr.htm (updated Dec. 24, 2002).

[17] Michael A. Swiger and Charles R. Sensiba, *Is Hydropower Facing Extinction? Market Forces and Relicensing Conditions Threaten the Viability of Dams*, 23 Leg. Times 17 (Apr. 24, 2000).

[18] FERC, *supra* n. 12.

[19] *Id.*

[20] Christine A. Klein, *Dam Policy: The Emerging Paradigm of Restoration*, 31 Envtl. L. Rep. 10486 (May 2001).

[21] *Id.*; *see* Michael Collier, U.S. Geological Survey, Circular 1126, *Dams and Rivers: A Primer on the Downstream Effects of Dams* 7 (1996).

[22] Klein, *supra* n. 20 (citing Devine, *infra* n. 26).

[23] *Id.*

releasing clear water at a force that can scour downstream riverbeds and shoreline habitats.[24] Natural streamflow may be reduced to a point where migration responses of anadromous fish[25] are no longer triggered, disrupting their reproductive cycle.[26] As a result of these changes, 67% of freshwater mussels, 64% of crayfish, 36% of fish, and 20% of dragonflies are extinct or facing extinction in the United States.[27]

These changing attitudes about hydropower are consistent with concerns addressed in federal environmental laws adopted since 1969. The advent of the National Environmental Policy Act (NEPA),[28] the Clean Water Act (CWA),[29] and the Endangered Species Act (ESA)[30] injected environmental constraints into the FERC licensing process. NEPA requires environmental study of all major federal actions, including FERC licensing proceedings.[31] The ESA requires federal agencies to act in ways that are "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat ...."[32] The CWA requires a section 401 water quality certification for hydropower plants prior to granting a license or relicense.[33] Additionally, Congress amended the FPA in 1986 to require FERC to give "equal consideration" to environmental impacts.[34]

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[24] *Id.*

[25] Anadromous fish are born in freshwater rivers, travel downstream to the ocean to live out their adult lives, and then return upstream to spawn and die. Species include salmon, sturgeon, shad, and striped bass. Doug Cooke, *Anadromous Fish and the Santee Cooper System*, Vol. V.3 SC Rvr News 1 (Winter 2000) (South Carolina Department of Natural Resources Newsletter) (available at http://www.dnr.state.sc.us/water/envaff/river/stewardship/newsletter/winter00.pdf) (accessed Jan. 25, 2003).

[26] Robert S. Devine, *The Trouble With Dams; Environmental Problems, High Costs of Operation*, 276 Atlantic Monthly 64, 74 (1995).

[27] Klein, *supra* n. 20 (citing *id.*).

[28] *National Environmental Policy Act of 1969* (83 Stat. 852 as amended; 42 U.S.C. §§ 4321, 4331 – 4335, 4341, and 4347).

[29] *Federal Water Pollution Control Act of 1972* (1977 amendments; 33 U.S.C. §§ 1251 – 1387).

[30] *Endangered Species Act of 1973* (87 Stat. 884; 16 U.S.C. §§ 1531 – 1534).

[31] 42 U.S.C. § 4332 (2000); 18 C.F.R. § 380.5(b)(10).

[32] 16 U.S.C. § 1536 (a)(2).

[33] 33 U.S.C. § 1341 (2000).

[34] *Electric Consumer Protection Act of 1986*, Pub. L. No. 99-495, § 3, 100 Stat. 1243 (1986) (codified in 16 U.S.C. §§ 792 - 828(c) (2000)).

The Duke and Alcoa[35] dams were originally licensed prior to the enactment of the CWA, ESA, and NEPA.[36] Hence, for the first time in their operating history, these plants must comply with important federal statutes as part of their relicensing process.[37] Furthermore, all four relicensings will be subject to conditions relating to environmental protection recommended by fish and wildlife agencies; fishways prescribed by either the U.S. Department of the Interior (Interior) or the U.S. Department of Commerce (Commerce) or both; and water quality certification by the South Carolina Department of Health and Environmental Control (DHEC).

Part I of this note will provide a brief description of the FERC relicensing process. Part II will identify major procedural and substantive issues affecting the relicensing process and analyze cases in federal court appealing FERC relicensing decisions. And finally, part III will offer comments and conclusions regarding the relicensing process facing Alcoa, Duke, SCE&G, and Santee Cooper in light of the evolving regulatory climate.

I. BACKGROUND OF THE RELICENSING PROCESS

The FPA created a five-member quasi-judicial body, called the Federal Energy Regulatory Commission (FERC), whose members are appointed by the President with advice and consent from the Senate.[38] Commissioners are full-time, salaried employees with no pecuniary

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[35] Catawba-Wateree Plant license was issued on Sept. 17, 1958 (20 F.P.C. 360, 1958 WL 2516 F.P.C.). Yadkin-Pee Dee Plant license was issued on Apr. 3, 1957 (17 F.P.C. 493, 1957 WL 4253 F.P.C.), and amended in 1968 (39 F.P.C. 397, 1968 WL 4254 F.P.C.). Lexington Water Power Company was issued a license for Saluda dam on Aug. 5, 1927 (3 F.P.C. 1007, 1943 WL 1629 F.P.C.). The license was transferred to SCE&G in 1943 (3 F.P.C. 1007, 1943 WL 1629 F.P.C.), and amended in 1967 (38 F.P.C. 1235, 1967 WL 3954 F.P.C.). A new license was issued in 1984 (27 F.E.R.C. P 61,332, 271984 WL 56802 (FERC)) and amended in 1988 (44 F.E.R.C. P 62,289, 1988 WL 245757). Santee Cooper license was issued on Apr. 2, 1926, and amended in 1927 and 1933 (1 F.P.C. 78, 1933 WL 873 F.P.C.). A new license was issued in 1979 (7 F.E.R.C. P 61,148, 1979 WL 2040 F.E.R.C.).

[36] The National Environmental Policy Act was enacted in 1969. The Clean Water Act was enacted in 1972, amended in 1977. The Endangered Species Act was enacted in 1973.

[37] Since NEPA's inception, NEPA documents have been required for FERC Orders concerning aspects of license operation, such as shoreline management plans.

[38] 16 U.S.C. § 792 (2000).

interest in or official relationship with any licensee, person, or corporation engaged in transmission, distribution, or sale of power, and with no stock or bond ownership in such a corporation.[39] FERC is required to hold evidentiary hearings and issue orders relating to the issuance and control of a license.[40]

FERC issues an original license for a maximum period of fifty years.[41] The license authorizes construction, operation and maintenance of hydropower plants that are "located on a navigable waterway of the United States, occupy U.S. lands, utilize surplus water or water power from a U.S. government dam, or are located on a body of water over which Congress has Commerce Clause jurisdiction, where the project construction occurred on or after August 26, 1935, and the project affects the interests of interstate or foreign commerce."[42] Upon expiration of a license, FERC can issue a new license (relicense) to either the existing licensee, or a new licensee, or in the alternative decommission the project.[43] The process for obtaining a relicense is essentially the same as obtaining a new license. Holding a FERC license is not considered to be a property right in the river itself.[44] Because rivers are held in public trust, no private entity can possess a property interest in the right to river flow.[45] The license is thus conferred as a privilege.

As part of FERC's decision whether to issue licenses, the FPA, as amended in 1986, requires that FERC give "equal consideration"[46] to economic and environmental values, including development of hydropower, fish and wildlife habitat, visual resources, cultural resources, recreational opportunities, irrigation, flood control and water supply. FERC must also ensure that the project: (1) is adapted to state

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[39] *Id.*

[40] Certain projects are exempt from licensing requirements. Small hydropower plants generating 5 megawatts or less, built at an existing dam or using a natural water feature for head are exempt, as well as an existing project generating 5 megawatts or less that plans to increase capacity. Also exempt are projects built on an existing conduit generating 15 megawatts or less if non-municipal and 40 megawatts or less if municipal. 16 U.S.C. § 823(a) (2000).

[41] 16 U.S.C. § 799 (2000).

[42] Federal Energy Regulatory Commission, *Hydroelectric Project Licensing Handbook* 1-2 (Apr. 2001) (available at http://www.ferc.fed.us/hydro/docs/licensing_handbook.pdf) (accessed Jan. 24, 2003).

[43] 16 U.S.C. § 808 (2000).

[44] *United States v. Grand River Dam Authority*, 363 U.S. 229 (1960).

[45] *Id.*

[46] 16 U.S.C. § 797(e) (2000).

comprehensive water plans;[47] (2) includes means to protect or mitigate damage to fish and wildlife based on recommendations of state and federal fish and wildlife agencies;[48] and (3) includes fishways prescribed by the respective secretaries of Interior and Commerce.[49] In addition, all license applications must include environmental assessments (EAs) or environmental impact statements (EISs) as required by NEPA.

Any person or corporation can file a license application for a license or relicense.[50] Consequently, there may be competing applications between the existing licensee and one or more new applicants for a relicense of a hydropower project. The existing licensee is required to file a Notice of Intent (NOI) to file an application for a relicense at least five years prior to the license expiration.[51] Upon receipt of this NOI, FERC will provide public notice and notify appropriate agencies such as the Environmental Protection Agency (EPA) and Interior.[52] At least two years prior to the license expiration, an existing licensee must file for relicensing.[53] Potential competitors must file an NOI no later than the FERC deadline for receiving comments or interventions concerning the original licensee's application for relicense.[54]

Applicants can select from two relicensing processes: the traditional approach or the alternative approach.[55] The traditional approach is more lengthy and is comprised of three prefiling stages and two postfiling stages. The alternative approach is intended to shorten the process by overlapping the pre-filing consultation, environmental review, and the CWA requirements.

A. The Traditional Process

1. Stage One: Information Gathering

The first stage of relicensing involves preparation of an initial consultation package about the hydropower project to be made available to

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[47] 16 U.S.C. § 803(a)(2)(a) (2000).

[48] 16 U.S.C. § 803(j) (2000).

[49] 16 U.S.C. § 811 (2000) (This authority is typically delegated to the Fish and Wildlife Service and the National Marine Fisheries Service.).

[50] 18 C.F.R. § 4.31(a) (2002).

[51] 18 C.F.R. § 16.6(c) (2002).

[52] 18 C.F.R. § 16.6(c)(2) (2002).

[53] 18 C.F.R. § 16.9(b) (2002).

[54] 18 C.F.R. § 16.9(d)(3) (2002).

[55] FERC, *supra* n. 42.

the public, that includes information regarding the existing plant, any proposed modifications, the affected environment, any preliminary natural resource protection, mitigation or enhancement plans, and proposed studies to be made available to the public.[56] The existing licensee uses this package to solicit input from federal and state agencies, Indian tribes, environmental organizations, and the public.[57] The licensee then engages in consultation with relevant federal, state, and interstate resource agencies concerning the project design, the project impact, and studies that must be done. Agencies that must be consulted include the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (FWS), the National Park Service, the EPA, and state water resource agencies.[58] The applicant should also seek out local conservation groups and water providers for identification of issues in need of study. Consulting agencies have from thirty to sixty days to review this package.[59]

2. Stage Two: Agency Notice and Hearing

Following this initial review period, the licensee must hold a public meeting with the various agencies to "develop a common understanding of the proposed project; discuss current and potential resource needs and management objectives for the project area; decide what information is needed and what studies are to be done; and agree on a time frame and format for discussion of study results."[60] If disagreement arises over the need to conduct a study, the applicant or organization may refer the dispute to FERC for resolution.[61] FERC decides whether the disputed study is needed by assessing whether the study is reasonable and necessary in relation to the goals and objectives of the resource agencies and whether the study method is a generally accepted practice.[62]

3. Stage Three: Study and Information Gathering

Once study plans are agreed upon, the applicant moves forward with the identified studies and obtains all reasonable information necessary for

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[56] 18 C.F.R. § 4.38(b)(1) (2002).

[57] *Id.*

[58] FERC, *supra* n. 42 at 3-8; 18 C.F.R. § 4.38(b)(1).

[59] 18 C.F.R. § 4.38(b)(2) (2002).

[60] FERC, *supra* n. 42 at 3-10; 18 C.F.R. § 4.38(2)(i) (2001).

[61] 18 C.F.R. § 4.38(b)(5) (2001).

[62] FERC, *supra* n. 42 at 3-12; 18 C.F.R. § 4.38(b)(5) (2001); 18 C.F.R. § 16.8(b)(5) (2001).

FERC to make an informed decision about the application.[63] Studies should include assessments of how the project will stimulate economic growth, how it will provide cheaper electricity, or how the project will be used to meet increasing demand for electricity.[64] Technical assessments of the project's operation must be performed, including studies of average annual energy production with minimum and maximum recorded water flows at the site.[65] Economic studies should include the cost of the project's power compared with the least costly equivalent alternative power, feasibility of project financing, capital and operating costs, and the estimated cost of relicensing.[66] Safety evaluations of the dams are also required.[67] Environmental studies should describe the affected environment, the project's beneficial and adverse effects, and protection, mitigation and enhancement measures. Alternatives in operations that improve water quality, improve dissolved oxygen content, improve temperature levels of downstream flow, reduce erosion and sedimentation caused by the plant's operation, and improve fish habitat also should be included.[68]

These studies are incorporated into a draft application that is distributed to all resource agencies, Indian tribes, and interested parties for comment.[69] If a natural resource agency disagrees with substantive conclusions of the applicant, the applicant must schedule a meeting to resolve the issue.[70] To finalize the application, the applicant must complete exhibit E of the application, which should include: evidence of consultation efforts; all natural resource agency comments, recommendations, and preliminary terms and conditions for inclusion in the license; section 401 certification by the state regulatory agency administering the CWA; and a statement of consistency or lack thereof with state comprehensive plans for water and other resources.[71]

FERC is prohibited from issuing a license without the section 401 Water Quality Certification or a waiver of the certification from the state agency.[72] The section 401 certification requirement is considered waived

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[63] 18 C.F.R. § 4.38(c) (2001); 18 C.F.R. § 16.8(c) (2001).
[64] FERC, *supra* n. 42 at 3-15; 18 C.F.R. § 16.10 (2001).
[65] *Id.*
[66] *Id.* at 3-16.
[67] *Id.*
[68] FERC, *supra* n. 42 at 3-17.
[69] 18 C.F.R. § 4.38(c)(4) (2002).
[70] FERC, *supra* n. 42 at 3-19; 18 C.F.R. § 4.38(c)(5) (2002).
[71] 18 C.F.R. § 16.8(f)(7)(i) (2002).
[72] 18 C.F.R. § 4.38(f)(7)(i)(A) – (C) and (f)(7)(ii) (2002).

if the certifying state agency took no action for a period of one year from the certification request.[73]

The complete application is filed with the Secretary of FERC and with all consulting natural resource agencies. Within two weeks of submittal, FERC issues a public notice of receipt soliciting requests for any other needed studies.[74] The applicant must respond to these requests as well as any identified errors in the application or requested amendments.

FERC also solicits comments from the public concerning the application and offers the opportunity for individuals and groups to file a motion to intervene to become an official party to the proceedings. A motion to intervene must "state, to the extent known, the position taken by the movant and the basis in fact and law for that position."[75] The motion must describe the party's interest in enough detail to show the party has an interest affected by the proceeding, whether that interest be as a consumer, competitor, or as representing the public interest.[76]

4. Stage Four: Environmental Review

In the meantime, FERC technical staff review the application to ensure its compliance with FERC regulations. If the application is found to be patently deficient, meaning that it fails to meet basic regulatory requirements, FERC rejects the application.[77] If FERC finds the application to contain lesser deficiencies, it issues a deficiency letter.[78] An applicant can resubmit a corrected application if the two year deadline for filing has not expired.[79] A correct and complete application triggers a public notice of application by FERC published in the Federal Register and local newspapers, which provides a sixty-day time period for comment, protests or intervention from concerned citizens or groups.[80]

After comments are received, FERC evaluates all data to determine whether it is adequate to conduct environmental reviews under NEPA.[81]

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[73] *Id.* at (f)(7)(ii).

[74] FERC, *supra* n. 42 at 3-22; 18 C.F.R. § 4.32 (2002); 18 C.F.R. 16.9(c) (2002), (d)(2) (2002).

[75] 18 C.F.R. § 385.214(b)(1) (2002).

[76] 18 C.F.R. § 385.214(b)(2)(ii) (2002).

[77] 18 C.F.R. § 4.32(e) (2002).

[78] *Id.* at (e)(1)(i).

[79] FERC, *supra* n. 42 at 3-23.

[80] FERC, *supra* n. 42 at 3-24; 18 C.F.R. § 4.34(b) (2002); 18 C.F.R. § 16.9(d)(1) (2002).

[81] FERC, *supra* n. 42 at 3-24.

This scoping process is encapsulated into a scoping document for public review, which establishes another comment period for public response on NEPA-related issues.[82] If the nature and volume of comments warrant, public scoping meetings are held.[83] When the information is deemed sufficient, the application is "ready for environmental analysis" and FERC begins its environmental and engineering review of the application.

FERC will normally prepare an EA assessing the license application.[84] An EA is defined as a brief document that provides enough evidence to determine whether an EIS is warranted, and provides enough information for FERC to make decisions.[85] EA's must include a brief discussion of the need for the proposal, alternatives to the FERC license (including no action), the environmental impacts of the proposed action and alternatives, as well as a list of agencies and persons consulted.[86]

The EA concludes that the particular relicensing either does or does not constitute a major federal action significantly affecting the environment.[87] If the relicensing is considered a major federal action significantly affecting the environment, a full-blown EIS is required.[88] However, FERC prepares an EIS only in rare circumstances.[89] FERC makes the EA or EIS available for public review and comment. FERC also accepts motions to intervene at this juncture.[90]

Section 10(j) of the FPA requires FERC to consider and include license conditions to "adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat) affected by the development."[91] These conditions are based on recommendations by NMFS, FWS, and state fish and wildlife agencies.[92] If FERC determines that these recommendations conflict with requirements of the FPA, it must attempt to resolve the inconsistency.[93] If FERC rejects the recommended conditions in whole or in part, it must

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[82] *Id.*

[83] *Id.*

[84] 18 C.F.R. § 380.5(10) (2002).

[85] 18 C.F.R. § 380.2(d) (2002).

[86] 18 C.F.R. § 380.2(d)(3) (2002).

[87] 18 C.F.R. § 380.4(b)(1) (2002).

[88] 18 C.F.R. §§ 380.4(b)(1)(ii), 380.6(a)(4) (2002).

[89] *Supra* n. 42 at 3-25. The only category of hydropower projects within FERC's NEPA regulations (18 C.F.R. § 380.6(a)(4) (2002)) that requires an EIS is the construction of new hydropower projects.

[90] 18 C.F.R. § 380.10(a)(1)(i) (2002).

[91] 16 U.S.C. § 803(j)(1) (2000).

[92] *Id.*

[93] 16 U.S.C. § 803(j)(2) (2000).

issue findings that the proposed recommendations were inconsistent with the FPA and that the conditions selected for inclusion into the license adequately and equitably protect fish and wildlife.[94]

Section 18 of the FPA requires licensees to construct, operate, and maintain at their own expense, fishways "prescribed" by the FWS.[95] If either department finds fishways to be necessary, the requirement is inserted into the license.

5. Stage Five: Licensing Decision

Finally, assuming that everything is in order, FERC is poised to grant a relicense. The relicense takes the form of an order that contains the findings and terms of the relicense.[96] The relicense becomes final thirty days after the order is issued unless a party to the proceeding moves for a rehearing and FERC subsequently defers the effective date.[97] Upon receiving a request for a rehearing, FERC can grant the request, deny the request, or modify its order with a hearing.[98] Once a rehearing request has been denied, a party can appeal a FERC order in federal circuit court.[99]

B. The Alternative Licensing Approach

Licensing or relicensing can move faster under the alternative approach adopted by FERC in 1997.[100] The alternative approach incorporates the same requirements as the traditional licensing track but allows the environmental scoping process to occur at the same time as the pre-filing consultation with the various natural resource agencies.[101] The alternative process also allows the applicant to substitute a preliminary draft EA or EIS prepared by a third party contractor for exhibit E of the license application.[102] An applicant using the alternative process must file progress reports with FERC and maintain a public file of all studies,

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[94] *Id.*

[95] *Federal Power Act*, § 18; 16 U.S.C. § 811 (2000).

[96] FERC, *supra* n. 42 at 3-28.

[97] 16 U.S.C. § 8251(a) (2000).

[98] *Id.*

[99] *Id.* at (b).

[100] Fred Ayer, *Collaboration from the Ground Up, Water & Dam Construction* 26 (June 30, 2001).

[101] 18 C.F.R. § 4.34 (i)(2)(i) (2002).

[102] 18 C.F.R. § 4.34 (i)(2)(iii) (2002).

correspondence, meeting minutes, and other relevant documents.[103] Forty percent of applicants use the alternative process.[104]

An applicant must make a request to FERC to use the alternative process.[105] FERC gives public notice of the applicant's request and solicits comments as to whether it should grant or deny the request.[106] FERC's decision is not subject to rehearing or appeal.[107] FERC has only denied one request to use this process since its inception.[108]

C. Annual Licenses

If the expiration date for the existing license has passed and the relicense application is pending, FERC must issue an annual license to the existing licensee on the same terms as the original license.[109] The annual license allows for continuity and certainty in operation during the relicensing process. An annual license is automatically renewed each year, unless FERC orders otherwise.[110] FERC may incorporate into the annual license "additional or revised interim conditions if necessary and practical to limit adverse impacts on the environment."[111]

II. PROCEDURAL AND SUBSTANTIVE ISSUES

FERC relicensing of hydropower projects has come under increasing scrutiny and criticism of late, resulting in tension between interests in maintaining a viable hydropower industry and interests in restoring or mitigating impacts resulting from that industry. From a procedural standpoint, the hydropower industry has complained that the relicensing process is overly burdensome and time consuming. This criticism has generated the prospect of congressional action to streamline the process.[112] From a substantive standpoint, environmentalists have pushed for FERC

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[103] 18 C.F.R. § 4.34(6)(iii) (2002).

[104] FERC, *Inside FERC: Hydro Licensing Parties Try to Get Moving on Oldest Proceedings* 7 (Dec. 17, 2001).

[105] 18 C.F.R. § 4.34(i)(3) (2002).

[106] 18 C.F.R. § 4.34(i)(5) (2002).

[107] *Id.*

[108] Ayer, *supra* n. 100 at 26.

[109] 18 C.F.R. § 16.18(b) (2002).

[110] *Id.* at (c).

[111] *Id.* at (d).

[112] *See generally* Natalie M. Henry, *Nelson, Craig Push for Hydropower Amendment in Energy Bill*, Vol. 10.9 Environment and Energy Daily (Apr. 24, 2002).

to decommission dams or impose more stringent environmental conditions on licensees.[113] This assertiveness has yielded a FERC order to remove one dam, voluntary decommissioning of dams by licensees faced with costly compliance with environmental regulations,[114] and a series of Circuit Court decisions concerning the extent of FERC's environmental decision making.[115]

A. The Controversy Over FERC's Licensing Powers

Historically, FERC enjoyed significant autonomy in its power to determine hydropower licensing and in dictating project operation.[116] FERC's decisionmaking rarely recognized the negative impacts of dams upon fish and wildlife.[117] Even original provisions in the FPA that required FERC, in its licensing of projects on Indian reservations, to accept license provisions from Interior to protect Indian reservations, were largely ignored.[118]

As environmental awareness grew, Congress passed the 1986 Electric Consumer Protection Act (EPCA), which added environmental considerations to FERC's hydropower licensing process.[119] It added the equal consideration standard, incorporated into section 4(e) of the FPA, requiring FERC to give "equal consideration to developmental and environmental values."[120] The ECPA also added section 10(j) to the FPA, requiring that FERC include conditions in the license to protect and enhance fish and wildlife based on recommendations from fish and wildlife agencies.[121]

The first blow to FERC's uncontested exclusive authority to license hydropower projects was made in the Supreme Court decision of *Escondido Mutual Water Company v. La Jolla Band of Mission Indians*.[122] There, the Court held that section 4(e)'s requirement that FERC include

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[113] *See generally* Klein, *supra* n. 20.

[114] *Id.* at 10494 - 1095.

[115] *See infra* nn. 122, 125, 136, 147.

[116] Michael C. Blumm and Viki Nadol, *The Decline of the Hydropower Czar and the Rise of Agency Pluralism in Hydroelectric Licensing*, 26 Colum. J. Envtl. L. 81, 89 (2001).

[117] *Id.* at 87.

[118] *Id.* at 88.

[119] *Supra* n. 34.

[120] 16 U.S.C. § 797(e) (2000).

[121] 16 U.S.C. § 803(j)(1) (2000).

[122] 466 U.S. 765 (1984).

Interior's conditions for projects on Indian reservations was mandatory and compelled FERC to abide by it.[123] The Court's ruling was a "groundbreaking decision" because FERC "was no longer the lone hydropower decision maker."[124]

The next decision eroding FERC's exclusive domain was *PUD No. 1 of Jefferson County v. Washington Department of Ecology* (known as the *Dosewallips* case).[125] Initially, the City of Tacoma (Tacoma) sought a license to build a hydropower plant on the Dosewallips River.[126] The project proposed to divert 75% of the river's water flow, leaving a downstream flow of between 65 and 155 cubic feet per second, depending on the season.[127] When the State of Washington (Washington) received the applicant's request for a water quality certification under section 401 of the CWA, Washington initiated a hydrology study to determine the minimum down-stream flow needed to protect fish.[128] Based on this study, Washington agreed to grant the certification upon condition that minimum flows be substantially increased.[129] Tacoma then challenged Washington's authority to impose minimum stream flows as a condition of a section 401 certification.[130] The Washington State Supreme Court upheld Washington's requirement.[131] Tacoma appealed to the U.S. Supreme Court.

The Court held that the FPA did not conflict with the states' authority to regulate water quality under the CWA.[132] It ruled that section 401's certification process allowed states broad leeway to require certain minimum stream flows to satisfy water quality standards.[133] Washington could base its minimum stream flow standard upon specific, numeric, or general narrative water quality criteria, as well as upon state water anti-degradation and use policies.[134] Also important, the Court held that Washington could impose water quality conditions on an entire activity

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[123] 466 U.S. 765 at 772 (1984).

[124] Blumm and Nadol, *supra* n. 116 at 95.

[125] 511 U.S. 700 (1994).

[126] *Id.* at 708.

[127] *Id.* at 709.

[128] *Id.*

[129] *Id.*

[130] *Washington Dept. of Ecology v. PUD No. 1 of Jefferson County*, 121 Wash.2d 179, 849 P.2d 646 (Wash. 1993).

[131] *Id.* at 183, 648.

[132] *Dosewallips*, 511 U.S. 700, 722 - 723 (1994).

[133] *Id.* at 714 - 718.

[134] *Id.*

such as water withdrawal from a river and not just pollutant discharges.[135] Hence, *Dosewallips* authorized states to impose section 401 conditions on licenses, but did not address whether FERC could reject state conditions.

The U.S. Court of Appeals for the Second Circuit addressed this issue in *American Rivers v. FERC* (known as *American Rivers I*), holding that FERC could not reject such conditions.[136] In *American Rivers I*, FERC received the State of Vermont's section 401 certifications that contained 18 conditions but refused to incorporate 3 of those conditions and part of a fourth into the license.[137] The three rejected amendments reserved respectively state authority to approve significant project changes, oversee operating conditions impacting water levels, set schedules for completion of fishways, and amend the certification.[138] FERC argued that these conditions exceeded state authority under the CWA because they were unrelated to water quality.[139]

The Second Circuit held that the FPA did not authorize FERC to judge which conditions met section 401 requirements.[140] Furthermore, the court ruled that states could change, amend, or revoke certification provisions after they were incorporated into a license.[141] And the court determined that if disputes arose over the validity of a state's action, only the court had the authority to decide whether the state exceeded its authority under the CWA.[142] *American Rivers I* validated states' ability to influence substantive aspects of a license issued by FERC through the section 401 process.[143]

FERC's response to *American Rivers I* was to narrowly construe its holding.[144] In several relicensing decisions, FERC rejected state section 401 certification conditions that allowed a state to review and change its certification based on proposed changes to a project.[145] It based such rejections on its opinion that "once it issued a license containing state

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[135] *Id* at 719.
[136] 129 F.3d 99, 112 (2d Cir. 1997).
[137] *Id.* at 105.
[138] *Id.*
[139] *Id.* at 106.
[140] *Id.* at 107 - 111.
[141] *Id.* at 108 - 109.
[142] *Id.*
[143] Blumm and Nadol, *supra* n. 116 at 106.
[144] *Id.* at 107.
[145] *Id.*

water quality conditions, states may not oversee implementation of such conditions."[146] A court has not yet heard a case concerning this issue.

A mixed victory for environmentalists came from the U.S. Court of Appeals for the Ninth Circuit's 2000 ruling in *American Rivers v. FERC* (known as *American Rivers II*).[147] In this case, a coalition of environmental groups (Petitioners)[148] challenged FERC's relicensing of a hydropower plant located on the McKenzie River in Oregon.[149] The Petitioners argued that FERC granted the license without adequate environmental review under NEPA and section 4(e) of the FPA and that FERC violated sections 10(j) and 18 of the FPA.[150]

The Petitioners asserted that FERC's final EIS erroneously used the project's existing operating terms and conditions as the "no action" alternative, instead of using a "theoretical reconstruction of what the McKenzie River basin would be like today had the ... projects not been in place for the greater part of this century."[151]

Under the FPA, the Petitioners argued that FERC violated the "equal consideration" of nonpower values as required under section 4(e) by ignoring pre-dam environmental conditions.[152] The Petitioners argued that the proper "no action" alternative under NEPA should be not issuing a license at all.[153] The court held that FERC's choice of existing conditions for the baseline "no action" alternative complied with both NEPA and the FPA.[154]

Under the FPA, the court found legislative history that strongly supported FERC's construction of section 4(e), and concluded that FERC's interpretation was reasonable and thus warranted deference.[155] Under NEPA, the court agreed with FERC's position that denial of a license would not constitute "no action" in the case of relicensing because denial "would require action ... such as federal takeover, issuance of a

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[146] *Id.*, citing *Seneca Falls Power Corp.*, 78 F.E.R.C. P 62,113, 64,396 - 64,397 (1997).

[147] 201 F.3d 1186 (9th Cir. 2000).

[148] *Id.* The coalition consisted of American Rivers, Pacific Rivers Council, Oregon Natural Resources Council, WaterWatch of Oregon, and Friends of the Earth. DOI, DOC, the National Oceanic and Atmospheric Administration (NOAA), NMRS, and EPA also intervened as petitioners.

[149] *American Rivers II* at 1190.

[150] *Id.*

[151] *Id.* at 1195.

[152] *Id.*

[153] *Id.*

[154] *Id.* at 1199.

[155] *Id.* at 1196 - 1199.

nonpower license, or project decommissioning."[156] Thus, the only true "no action" was continuation of the project's existing license under the same terms and conditions.[157] The court also found support for this ruling from the President's Council on Environmental Quality (CEQ),[158] which stated that for ongoing programs, the "no action" alternative means no change from current management direction.[159]

The Petitioners also challenged FERC's rejection of twenty-one recommendations proposed by federal and state fish and wildlife agencies forwarded to FERC pursuant to FPA section 10(a)(2)(b).[160] The Petitioners alleged that some of the recommendations fell within section 10(j) of the FPA, which requires FERC to make findings as to why it rejected the recommendation. However, FERC "reclassified" the recommendations under section 10(a)(2)(b), which does not require such findings.[161] The court held that FERC used its discretion properly to decide how and whether to incorporate recommendations.[162]

Finally, the Petitioners argued that FERC improperly rejected fishways prescribed by the FWS under section 18.[163] FERC had concluded that the fishways prescribed were not really fishways thus rejecting the condition outright.[164] The court noted that mandatory section 18 requirements gave FERC no discretion in rejecting fishways, and held that FERC cannot "modify, reject, or reclassify any prescriptions submitted by the Secretaries [of Interior or Commerce] under color of section 18."[165]

The U.S. Court of Appeals for the District of Columbia Circuit concurred with *American Rivers II* in *Conservation Law Foundation v. FERC*.[166] There, the court rejected the same argument as in *American Rivers II* that FERC's NEPA document should use pre-dam environmental conditions as the "no action" alternative.[167] In addition, it decided that a

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[156] *Id.* at 1200 (citations omitted).

[157] *Id.*; *see also* 18 C.F.R. § 16.18(b) (2002). Under this scenario, an annual license continuing the same terms and conditions of existing license would automatically be issued upon expiration of the existing license, without any action by FERC.

[158] 42 U.S.C. § 4342 (2000). The CEQ is authorized by NEPA to serve as policy advisor and interpreter of NEPA.

[159] *American Rivers II,* 201 F.3d 1186 (9th Cir. 2000).

[160] *Id.* at 1201 - 1203.

[161] *Id.* at 1203.

[162] *Id.*

[163] *Id.* at 1205.

[164] *Id.* at 1205 - 1206.

[165] *Id.* at 1210.

[166] 216 F.3d 41 (D.C. Cir. 2000).

[167] *Id.* at 45.

section 10(j) recommendation for minimum stream flow could be rejected by FERC under its discretionary power so long as it adequately considered both energy generation and environmental aspects in its decision.

The *Escondido*, *Dosewallips*, and both *American Rivers* cases set clear parameters for FERC's relationship with natural resource agencies and states in licensing projects. They confirmed a "democratization"[168] of the licensing process, curbing FERC's power to act unilaterally. In short, while FERC has latitude to reject fish and wildlife recommendations for environmental protection submitted under section 10, it has no choice but to include prescribed fishways under section 18. Further, states have significant influence upon stream flow terms of a license through section 401 CWA certification that FERC must include in the license.

FERC has faced minimal challenges over compliance with the ESA during the relicensing process. Only *Alabama Power Company v. FERC* addressed the issue.[169] In *Alabama Power*, the licensee was undergoing the relicensing process.[170] After FERC set the minimum stream flow for the Coosa River at 2,000 cubic feet per second (cfs) between June and February, and 4,475 cfs between March and May, Dr. Robert Herschler discovered *Tulotoma magnifica* in the dam tailwater.[171] Mollusk experts had considered these snails extinct after dams constructed in the 1960s flooded their habitat.[172] Upon the new discovery, FWS initiated the process for listing the snail as an endangered species.[173] Thereafter, Alabama Power asked FERC to reconsider its interim order requiring minimum stream flows in order to protect the snails.[174] FERC refused to adjust the stream flow.[175] In June, Alabama reduced flow to 2,000 cfs according to FERC's ordered minimum stream flows.[176] Consequently, many snails died "high and dry."[177]

Once FWS listed the snails as an endangered species, the ESA required that FERC consult with Interior about any action "likely to jeopardize the continued existence" of the snail, and to "ensure that any

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[168] *See supra* n. 20 at 10493.
[169] 979 F.2d 1561 (D.C. Cir. 1992).
[170] *Id.* at 1562.
[171] *Id.* at 1563.
[172] *Id.*
[173] *Id.*
[174] *Id.*
[175] *Id.*
[176] *Id.*
[177] *Id.*

agency action would not be likely to have this effect."[178] Alabama Power argued that FERC failed to comply with these requirements.

The Court found that FERC had not violated the ESA. Prior to denying Alabama Power's request to reduce stream flow, FERC did in fact consult with Interior, who informed FERC that the increased stream flow would not threaten the existence of the snails, but rather, would be beneficial to the snails.[179] Even though this advice led to the demise of many snails, the court found that FERC properly complied with its duty to confer with Interior to ensure no harm to the snails.[180]

B. The Controversy Over Process

Although the traditional relicensing process presumably takes five years, some proceedings take considerably longer.[181] As of 2001, 51 applications nationwide have been in limbo for 5 or more years.[182] Disagreement exists over the cause of delay. Hydropower companies point to the environmental conditions placed upon licenses as the main reason for delays in the licensing process.[183] Industry representatives like to hold up a project on the Pend Oreille River in Washington as an example of excessive conditions placed upon a relicense.[184] The dam operator contends that the long list of conditions placed on the relicense would cost $500 million over 30 years.[185] The proposed conditions include "reduced power generation during certain periods, a fish ladder, a new campground and a 50-mile bike path to make up for recreation opportunities lost when the river was dammed."[186] Environmentalists say the cost estimates are "grossly inflated" and argue that the conditions are

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[178] *Id.* at 1563 - 1564.

[179] *Id.* at 1564.

[180] *Id.* at 1565.

[181] For example, the Cushman Project's license in Washington State expired in 1974. After lengthy battles regarding the adequacy of environmental improvements, FERC finally issued a new license in 1998, 24 years later. 84 F.E.R.C. 61,107 (1998); order on reh'g, 86 F.E.R.C. 61,311 (1999); appeal pending, No. 99-1143 (D.C. Cir., filed Apr. 9, 1999).

[182] FERC, *supra* n. 104.

[183] David J. Hayes, *Energy Again - But With A Kicker*, 16 Nat. Res. & Envt. 215, 217 (2002).

[184] Dan Hansen, *Tiny Dam Making Waves; Relicensing Process Adds to Debate in D.C. Over Nation's Energy Policy*, The Spokesman Review, Spokane Washington, 2002 WL 6437050 (Mar. 10, 2002).

[185] *Id.*

[186] *Id.*

justified because the dam has operated for fifty years without adequately compensating the Kalispel Indian Tribe and the State of Washington.[187]

Moreover, Interior and the river advocacy group, American Rivers, argue the real reason for delay is the applicant's failure to submit complete applications containing required information.[188] From a broader perspective, American Rivers claims that only 9 out of 157 license applications in 1993 contained complete information.[189] Furthermore, only seven times since 1992 have natural resource agencies authorized to impose conditions filed those conditions after the FERC deadline over the objection of parties.[190]

Another reason cited for delay is settlement negotiations among parties. Those embroiled in a dispute and taking part in negotiations aimed at resolving it are not motivated to resolve the issues because there is no real deadline for a relicense to be issued. Annual licenses are automatically granted once the original license expires. In this situation, some parties would rather stay with the status quo and drag out the process than acquiesce to a compromise.[191]

Other delays are said to be caused by FERC. A project already under consideration may be put aside by FERC to be reviewed in conjunction with an upcoming project that is located on the same river in order to consider the cumulative environmental effects of both projects on the same river.[192]

Industry deregulation makes the hydropower industry particularly sensitive to environmental conditions placed upon licenses.[193] Traditionally, licensees have been granted a monopoly to provide electricity within specified geographical areas.[194] State public service commissions allow licensees to recover from their customers the cost of providing power, including the cost of complying with license terms.[195] Industry restructuring, however, has caused increased competition in open markets by putting in place processes by which consumers may choose their electricity provider.[196] Such competition puts huge pressure on

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[187] *Id.*
[188] Blumm and Nadol, *supra* n. 116 at 127.
[189] *Id.*
[190] *Id.*
[191] FERC, *supra* n. 104.
[192] *Id.*
[193] *See generally* Swiger and Sensiba, *supra* n. 17.
[194] *Id.*
[195] *Id.*
[196] *Id.*

hydropower companies to contain costs because companies forced to compete can no longer count on full recovery of costs associated with the environmental or public interest license terms.[197] If this trend continues, "both electric restructuring and the current licensing landscape could weaken hydropower's viability as a competitive generation source."[198]

Congress has made efforts to respond to the hydropower industry's concerns. In 1999, the 106th Congress considered S. 740, the Hydroelectric Licensing Process Improvement Act, intended to ease environmental burdens on the hydropower industry. Republican Senator Larry Craig of Idaho sponsored the bill along with co-sponsor Senator Strom Thurmond of South Carolina.[199] Supporters intended the bill to overturn the *Dosewallips* and *American Rivers* court decisions rejecting FERC's position that it was the sole decisionmaker in environmental matters.[200]

S. 740 proposed to add a new section to the FPA requiring natural resource agencies to justify their license conditions under section 18 according to "economic and power values, electric generation capacity and system reliability, air quality, flood control, irrigation, navigation, recreation, drinking water supplies, and compatibility with other license conditions."[201] Furthermore, the license conditions would be limited to those addressing "direct" effects of the project resulting in the lowest possible cost.[202] And, conditions would undergo "appropriately substantiated scientific review." Finally, Congress proposed to amend the section 18 requirement for mandatory fishways to allow FERC discretion in incorporating their conditions.

The 106th Congress did not adopt S. 740. However, battles over hydropower relicensing reemerged during the 107th Congress. Five bills were introduced offering revisions to the FPA's licensing process.[203] Most notable was H.R. 3800, the democratic response to the Bush administration's National Energy Plan provisions on hydropower.[204]

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[197] *Id.*

[198] *Id.*

[199] Other sponsors: Crapo (R - Idaho), Burns (R - Montana), Thomas (R -Wyoming), Grams (R - Minnesota), Hollings (D - SC), and Helms (R - NC), http://thomas.loc.gov (accessed Jan. 25, 2003).

[200] Blumm and Nadol, *supra* n. 116 at 125 (citing S. 740, 106th Cong., § 4).

[201] *Id.* at 124.

[202] *Id.*

[203] H.R. 1832, H.R. 3800, S. 71, S. 388, S. 389, 107th Cong. (2002).

[204] Dingell quoted as saying that "the Cheney report's ideas on hydroelectric power are most accurately described by the words dam, develop and destroy." FERC, *Inside*

Sponsored by Democratic Representative Dingell of Michigan, H.R. 3800 sought a major overhaul in the hydropower relicensing process, and attempted to address the primary complaint of the hydropower industry: the conditions placed on licenses by natural resource agencies without eroding environmental protection.[205] H.R. 3800 sought to revise section 4(e), pertaining to projects on reservations,[206] that required the federal department supervising the reservation to consider alternative conditions proposed by a licensee or other party to a licensing proceeding that may cost less or improve electricity production, yet provide equal or greater environmental protection than what the agency originally proposed.[207] The bill also proposed to revise section 18 by allowing licensees to offer an alternative to a prescribed fishway.[208]

In response to environmental interests, the bill contained an attempt to codify the *American River II* argument that the "baseline for FERC's environmental analysis would be the condition of a river without the hydropower project."[209] In addition, the bill proposed to establish a fund for states to apply toward fish and wildlife enhancements.[210] Such diverse groups as American Rivers, Trout Unlimited, the Hydropower Reform Coalition, the National Hydropower Association, the American Public Power Association, and the Edison Electric Institute supported the bill.[211]

While Rep. Dingell's bill stalled in committee, the Senate proposed its own amendments to the FPA.[212] S. 71, introduced by Senator Craig, proposed to create a new section delineating the process for consideration by federal agencies of conditions under sections 4(e) and 18.[213]. It required federal agencies to take into consideration the impacts of the

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FERC: Dingell, Markey Look to Revamp Hydro Licensing; Industry Shudders (Feb. 11, 2002).

[205] H.R. 3800, 107th Cong. (2002).

[206] "Reservations" are defined in the FPA as "national forests, tribal lands embraced within Indian reservations, military reservations, and other lands and interests in lands owned by the United States, and withdrawn, reserved, or withheld from private appropriation and disposal under the public land laws; also lands and interests in lands acquired and held for any public purposes; but shall not include national monuments or national parks." 16 U.S.C. § 796(2) (2000).

[207] H.R. 3800, § 16, 107th Cong. (2002).

[208] *Id.*

[209] *Id.* at § 10.

[210] *Id.* at § 14.

[211] Committee on Energy and Commerce Democrats, *Dingell Blasts Senate for Gutting Hydropower Provisions in Energy Bill* (Apr. 24, 2002) (press release).

[212] S. 71, S. 388 and S. 389, 107th Cong. (2002).

[213] S. 71, § 32, 107th Cong. (2002).

condition on economic values, power generation, air quality and other water uses, and assure that conditions addressed only direct environmental impacts at the lowest cost.[214] Each condition proposed by a natural resource agency would be subject to substantiated scientific review.[215] Furthermore, if a natural resources agency failed to submit a final condition within one year after notice from FERC that a license application is ready for environmental review, the agency would lose its authority to recommend or establish a condition.[216]

The other remaining Senate bills, S. 388 and S. 389, were identical to S. 71, but were referred to different committees.[217] Neither S. 388 nor S. 389 left their respective committees.

The only hydropower licensing reform bill that made any headway during the 107th Congress was an amendment to Bill 517. Introduced as a democratic response to President Bush's Energy Plan, Senators Daschle and Bingaman sponsored S. 517, dubbed the Energy Policy Security Act.[218] Article III of the Act contained "placeholder" language regarding hydropower licensing reform, with the intent of replacing it with substantive language at a later date.[219] The day before S. 517's passage by the Senate, Senators Smith, Craig and Nelson introduced amendment 3140, a hydropower industry-supported reform that continued the theme of weakening fish and wildlife agencies' ability to recommend license conditions.[220] As with S. 71, the amendment sought to limit federal agency ability to place conditions on projects within federal reservations.[221] The bill proposed to require the fish and wildlife agencies

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[214] *Id.*

[215] *Id.*

[216] *Id.* at 32(f).

[217] S. 388, 107th Cong. (2002); bill referred to Senate Committee on Energy and Natural Resources (Aug. 26, 2002). S. 389, 107th Cong. (2002); bill referred to Senate Finance Committee (Feb. 26, 2001).

[218] American Rivers, *Update: Hydropower and the National Energy Policy* (Feb. 4, 2002), http://www.americanrivers.org/hydropowerdamreform/energypolicy020402.htm (accessed Feb. 6, 2003).

[219] *Id.*

[220] Cong. Rec. S3255 - 3257 (Apr. 24, 2002).

[221] For definition of "reservation," *see supra* n. 206. The comments of the sponsors (Nelson, Smith, and Craig) during debate over amendment 3140 to S. 517 did not explicitly state why the alternative plan requirement only applied to reservations. However, all sponsors hale from western states (Nelson - Nebraska; Craig - Idaho, Smith - Oregon) and all spoke of the high number of western projects to be relicensed over the next few years. Cong. Rec. S3256 (Apr. 24, 2002). The Western United States is home to 70% of national hydropower capacity, with 9 out 10 of the largest hydropower plants

to approve any alternative plan that a licensee submitted in response to an agency recommended condition if it provided adequate protection to the reservation, and would cost less or result in improved electricity generation compared with the agency's conditions.[222] In addition, S. 517 proposed to amend section 18 of the FPA in the same manner as S. 71.[223]

The Senate approved S. 517 by voice vote on April 25, 2002. Upon receiving the House of Representatives' Energy Policy Act, the Senate gutted the House Act's substantive language and incorporated S. 517 into H.R. 4.[224] The House and Senate versions of the Energy Policy Act (covering all manner of energy-related issues of which hydropower was only a small part) were assigned to a conference committee to work out the differences. Opposing interests within the conference committee opted not to compromise on the major issues within this contentious bill, and instead let the Act wither on the vine in hope that the 2002 election results would swing republican or democratic power to the degree that compromise was unnecessary.[225] The republicans gained seats in the election, causing concern that FPA environmental safeguards will likely be diluted. In hindsight, democrats may have been wise to compromise on the Energy Policy Act prior to the elections. Congress will start again this year to craft a new bill addressing important energy matters, including the hydropower relicensing process.

On a parallel track, FERC announced its plans to revise its regulations concerning hydropower relicensing.[226] In September, FERC issued a Notice Requesting Comments and Establishing Public Forums and Procedures and Schedule for revision of its relicencing regulations.[227] Public forums took place in October and November 2002.[228] Tentatively, a Notice of Proposed Rulemaking will be issued in February 2003.[229] More public meetings will be scheduled in the Spring of 2003, with a final

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in the United States. Bruce C. Driver and Gregg Eisenberg, *Western Hydropower: Changing Values/New Visions* (report to the Western Policy Review Advisory Commission) (Aug. 1997). Senator Craig also noted that publicly owned hydropower projects constitute nearly 50% of the total hydropower capacity coming up for renewal by 2010. Cong. Rec. S328 (Jan. 22, 2001).

[222] S. 517, 107th Cong. (2002).

[223] *Id.*

[224] Cong. Rec. S3688 - 3788 (Apr. 25, 2002).

[225] Telephone interview with Steve Hartell, U.S. Senator Hollings' office (Jan. 24, 2003).

[226] FERC Docket No. RM02-16-000 (Sept. 12, 2002).

[227] *Id.*

[228] *Id.*

[229] *Id.*

rule tentatively to be completed in Fall 2003.[230] While it is unknown at this time how the new regulations might change the relicensing process, the Director of FERC stated his goal is to: (1) "simplify and discipline the process" while maintaining flexibility; (2) "to eliminate 'dead-ends' in the process that result in stalemates; and (3) eliminate 'sequential processing' of studies and reviews."[231]

Accordingly, within the year 2003, the face of hydropower relicensing may change on a legislative or regulatory level. Whether environmental concerns will be an integral part of the process depends upon environmental interest groups' success in articulating the importance of protecting riverine ecology.

III. CHALLENGES IN THE EVOLVING REGULATORY CLIMATE

To better assess the direction of hydropower relicensing in South Carolina, a brief description of the existing environmental protection provisions within the licenses of Duke, Alcoa, SCE&G, and Santee Cooper is a good starting point.

As part of SCE&G's 1984 license, DHEC granted a section 401 water quality certification relating to discharge from the dam, with no apparent conditions.[232] However, FERC prohibited point source discharges into Lake Murray.[233] To protect a tailwater trout fishery downstream, the South Carolina Department of Natural Resources (DNR) recommended that the minimum flow be released to maintain a water temperature no greater than seventy degrees. FERC rejected that recommendation.[234] FERC deferred recommendations by other natural resource agencies until SCE&G conducted further studies.[235] The dam currently has no prescribed fishways.[236]

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[230] *Id.*

[231] National Hydropower Association, *NHA Applauds FERC Licensing Reform Announcement* (Aug. 5, 2002) (press release) (available at http://www.hydro.org/newsroom/details.asp?t1=index.asp&n1=News+Room&t2=release.asp&n2=Press+Releases+%2D+2002&id=180&nyear=2002) (accessed Jan. 25, 2003).

[232] SCE&G, 27 F.E.R.C. P 61,332, 1984 WL 56802 at 3 (1984).

[233] *Id.*

[234] *Id.*

[235] *Id.*

[236] Telephone interview with Danny Johnson, Dir. of Envtl. Affairs, Div. of Land, Water & Conservation, DNR (Sept. 30, 2002).

In Duke's 1958 license, FERC included minimum downstream flows recommended by the South Carolina Board of Health (BOH, now DHEC).[237] BOH required Duke to coordinate regulated stream flows with Alcoa, located upstream.[238] In addition, BOH required Duke to comply with Interior's and BOH's reasonable modifications to the construction of a new dam development on the Catawba River to maintain water quality and natural habitat.[239] Neither organization prescribed fishways for the Duke license.[240]

Alcoa's 1957 license contained reasonable modifications of project structures and operations. The North Carolina Wildlife Commission and Interior recommended those modifications as necessary based on notice and findings of fact in order to protect fish and wildlife.[241] However, these agencies were given eight months to recommend modifications.[242] The license prescribed no fishways.[243]

In Santee Cooper's 1979 license, FERC noted that both Lakes Marion and Moultrie had high phosphorous loadings caused by point and non-point discharges upstream on the Congaree and Wateree Rivers as well as fecal coliform bacteria contamination.[244] The license required Santee Cooper to monitor point source discharges and FERC reserved the right to make reasonable changes to the project to maintain or improve water quality. The license also required the licensee to operate the boat lock at the Pinopolis dam as a fish passage for anadromous shad and herring into Lake Moultrie during spawning season.[245] Several provisions of the license dealt with the need to plan for recreational use of the lakes.[246]

The outcome of the Alcoa, Duke, SCE&G, and Santee Cooper relicensings will depend to some degree on the end result of whatever new version of the Energy Policy Act might be considered by Congress, as well as the FERC rulemaking to streamline the licensing process. If the relicensing provisions of the Energy Policy Act are adopted as proposed in the 107th Congress through the Senate version, natural resource agencies will be forced to acquiesce some authority to condition licenses. Such a

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[237] 20 F.P.C. 360, 361.
[238] *Id.*
[239] *Id.*
[240] Telephone interview with Dick Christie, Fish Biologist, DNR (Oct. 4, 2002).
[241] 17 F.P.C. 493, 499.
[242] *Id.*
[243] Christie, *supra* n. 240.
[244] *Santee Cooper*, 7 F.E.R.C. P 61,148, 1979 WL 20402 at 4 (1979).
[245] *Id.* at 12.
[246] *Id.* at 15.

change may be justified to counter bureaucratic tyranny, or it may be a conscious effort to avoid any mitigation costs associated with environmental damage caused by dams.

Fishways can cost $20 million or more.[247] When relicensing only occurs every 30 to 50 years, the prospect of incurring millions of dollars in expenses at the time of relicensing can be difficult for licensees to countenance. On the other hand, licensees have benefited from thirty to fifty years of little or no responsibility to mitigate damage and therefore, when relicensing comes up, it is only fair that licensees return some of that benefit to the public in the form of natural resource enhancement. The 107th Congress' Energy Policy Act sought the middle ground between these opposing viewpoints, but gave licensees more say in shaping the fishway conditions. Such a sharing of power would not necessarily overturn *American Rivers II* because the amendment still requires FERC to accept fishway requirements as part of a license.[248] However, it would reduce the force of a natural resource interest by injecting its uncompromised mechanism for fish protection. Additionally, the licensees' ability to propose alternative plans may inadvertently lengthen the relicensing process by adding another negotiation phase.

The FERC rulemaking, assuming it goes forward, will also affect the outcome of the South Carolina relicensings. Although licensees have the existing option of the faster alternative relicensing approach, most seem wary of the process and choose not to use it.[249] Reasons cited for this wariness are fear of the unknown and reluctance to share some measure of control that the collaborative process necessarily entails.[250] Natural resource agencies are also distrustful of the existing alternative approach because overlapping agency consultation and environmental review potentially could cause a less deliberative analysis of environmental problems.[251] As a result, licensees have fashioned a "hybrid" form of the traditional approach that emphasizes enhanced communication among stakeholders without giving up the more formal mechanisms of the traditional process.[252] The FERC rulemaking could produce a solution to this problem.

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[247] Christie, *supra* n. 240.
[248] H.R. 4, § 301, 107th Cong. (2002).
[249] Christie, *supra* n. 240.
[250] FERC, *supra* n. 104; *see also* Christie, *supra* n. 240.
[251] Christie, *supra* n. 240.
[252] *Id.*

The rulemaking also could resolve the problem of delay in relicensing due to incomplete applications submitted by licensees. As noted earlier, environmentalists argue that licensee failure to submit a complete application is the primary cause of delay in the relicensing process.[253] DNR contends that incomplete information makes development of natural resource license conditions more difficult.[254] Also, the delays associated with incomplete information do not adversely impact the licensee's relicensing timeline because FERC routinely grants an annual license under the same terms as the expired license if the relicensing process extends past the expiration date of the original license.[255] Additionally, FERC rarely, if ever, exercises its authority to reject incomplete applications or compel the licensee to resubmit a complete application.[256] Licensees may prefer the status quo that an annual license provides rather than settling upon new conditions of a relicense. Furthermore, time may be on the licensee's side where natural resource agencies are overextended and lack resources necessary to maintain long term focus on just one dam in the state. FERC's new regulations could offer disincentives for delay.

Regardless of process changes ahead, the Duke, Alcoa, SCE&G, and Santee Cooper relicensing processes will usher in a new awareness and action by DNR and DHEC with respect to the State's hydropower resources. For most of DNR's existence, it has not shown much interest in FERC relicenses.[257] But during the last ten years, DNR has taken its role more seriously, and is now actively involved in negotiating natural resource conditions.[258] Even so, DNR contrasts itself from the federal natural resource agencies that are perceived as more aggressive and uncompromising.[259] DNR prefers a collaborative approach with licensees, working to reach effective and realistic solutions to environmental problems.[260] With its increasing sophistication in negotiation, DNR clearly sees the upcoming relicensing proceedings as a window of opportunity to restore or improve fish and wildlife habitat.[261]

Santee Cooper offers the first opportunity. The project contains three dams, two of which already have some sort of fish passage. The Pinopolis

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[253] *See supra* n. 184.
[254] Christie, *supra* n. 240.
[255] *See supra* n. 109.
[256] *See* 18 C.F.R. § 4.32 (2002); observation made by Christie, *supra* n. 240.
[257] Telephone interview with Dick Christie, Fish Biologist, DNR (Oct. 4, 2002).
[258] *Id.*
[259] *Id.*
[260] *Id.*
[261] *Id.*

dam contains a boat lock that also serves as a fishway. However, Santee Cooper diverted eighty percent of water flow through the boat lock, causing anadromous fish populations to plunge.[262] Fish populations are currently only an estimated one million per year as opposed to ten million per year before the water diversion.[263] The St. Stevens dam contains a fish elevator, which has been criticized as being inadequate.[264] The U.S. Fish and Wildlife Service and South Carolina DNR are pushing for a fishway on the third dam, Wilson dam, which currently lacks a fishway.[265]

Another issue of concern for DNR is the presence of endangered species in and around the Santee Cooper dam. Currently, manatee live in the Berkeley River and have been killed or injured by the Santee Cooper dam operations.[266] Although the manatee are not present in large numbers, DNR wants some protection for these creatures.[267] Another endangered species, the short nosed sturgeon, lives in the reservoir.[268] The sturgeon are anadromous fish, normally traveling downstream to live their adult lives and traveling upstream to spawn. The sturgeon in Lake Marion are trapped in the lake with no means of traveling downstream. DNR's studies of the sturgeon reveal that they have an abnormal appearance for their species, possibly due to their isolation within the lake.[269]

The Lake Murray dam presents an entirely different context. The Saluda River is a cold-water river, which is not conducive to anadromous fish.[270] Therefore, a fishway on Lake Murray may not be a high priority. If a fishway were to be prescribed, the dam's height would make construction costly.

The Duke project on the Wateree River also presents a different context. Historically, several spawning areas existed on the Wateree River, both downstream and upstream from the Wateree dam. Yet today, there are not many anadromous fish in the Wateree River.[271] The dam itself is partially the cause for the decline, but the decline was occurring before the dam was constructed.[272] From a cost-benefit standpoint,

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[262] *Id.*
[263] *Id.*
[264] *Id.*
[265] *Id.*
[266] *Id.* (About one manatee per year is killed or injured at the Santee Cooper dam.)
[267] *Id.*
[268] *Id.*
[269] *Id.*
[270] *Id.*
[271] *Id.*
[272] *Id.*

requiring a fishway on the dam may not be justified because the fish population is so low. Even with the dam in place, anadromous fish have almost 200 miles of unimpeded river to roam. Thus, DNR's focus during relicensing may be developing strategies to restore fish populations further downstream on the Wateree.

The Alcoa project is located in North Carolina. Consequently, DNR has no jurisdiction to recommend environmental conditions. But, as with the three projects in South Carolina, DNR and DHEC have a substantial interest in establishing downstream flow from the Alcoa dams.

Minimum downstream flow is critical to preserving and protecting riverine ecology. Currently, any minimum downstream flow established in the licenses is based on a weekly average.[273] This arrangement leaves the licensee with the ability to widely fluctuate stream flow according to power needs. Such fluctuation is detrimental to sustaining wildlife habitat.[274] DNR will seek an instantaneous stream flow for all four relicensings, meaning that the licensee must maintain a minimum water flow suitable to wildlife at all times.[275]

Drought conditions in South Carolina from 1994 through 2002 resulted in record low stream flows,[276] which will create difficulty in determining a reasonable flow amount to include in the license.

The relicensing process also includes reassessment of licensees' plans for recreational facilities surrounding reservoirs. DNR has taken a more active role in shoreline management of the reservoirs created by hydropower plants in South Carolina. FERC requires licensees to submit shoreline management plans, and to update them every five years.[277] These plans describe current and proposed public recreation on the lake, and the licensees' plans to develop the lake through the private sale of land.[278] Relicensing provides DNR with an opportunity to negotiate for expanded public amenities and land conservation.

Finally, the *Dosewallips* case assures that DHEC's section 401 certification can significantly impact downstream flows of the three South

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[273] Johnson, *supra* n. 236.

[274] *Id.*

[275] *Id.*

[276] Masaaki Kinchi, *Multi-Year Drought Impact on Hydrologic Conditions in South Carolina, Water Years 1998-2001* (Mar. 2002) (available at http://www.dnr.state.sc.us/lwc/img/drought.pdf (accessed Jan. 25, 2003).

[277] Pursuant to FPA, sections 10(a)(1) and 4(e), FERC established standard license articles 5 and 18, incorporated into major projects, that require shoreline management plans.

[278] *Id.*

Carolina projects by placing conditions on the certification. In light of the strong possibility that the FPA will be amended to weaken natural resource agencies' influence on license conditions,[279] DHEC may stand as the only sure means of remedying stream flow problems. DHEC has rarely imposed conditions in the past, but plans to do so for the upcoming license proceedings.[280]

DHEC has changed its thinking about its role in FERC relicensing.[281] The agency has moved from little involvement to a growing awareness of its ability to affect change in riverine conditions through the section 401 certification. For example, in the past DHEC concluded that low dissolved oxygen levels downstream from reservoirs was a natural occurrence.[282] Within a reservoir, deep water is colder than water near the surface. The unfortunate consequence of such stratification is that the layer of deeper, colder water contains lower levels of dissolved oxygen in that stratum.[283] When a dam pulls water from these cold layers in the reservoir to release downstream, the low dissolved oxygen content in these layers adversely impact trout population found downstream.[284] Today, DHEC has reversed its position that this phenomenon is a natural occurrence, and plans to seek preventative measures within its section 401 certification process.[285] Also for the first time, DHEC plans to impose downstream flow conditions upon the Duke, SCE&G, and Santee Cooper section 401 certifications.[286] DHEC can also address the protection of the manatee within the Santee Cooper section 401 certification.[287]

However, the South Carolina regulations concerning the section 401 certification process may inadvertently pose an obstacle to DHEC's emerging assertiveness. Under regulation 61-101, DHEC must issue a notice of its proposed decision, and the applicant has a right to appeal.[288] If an applicant appeals, the approval of the section 401 certification may be delayed longer than the one-year time frame in which DHEC can issue its certification with conditions. Once a year has passed, the Federal Power Act considers a section 401 certification to be automatically

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[279] *See supra* n. 211.

[280] Telephone interview with Rheta Geddings, Water Bureau, DHEC (Oct. 14, 2002).

[281] *Id.*

[282] *Id.*

[283] *Id.*

[284] *Id.*

[285] *Id.*

[286] *Id.*

[287] *Id.*

[288] 25A S.C.Code Ann.Regs. 61-101(G) (Supp. 2002).

conferred upon the applicant, with no conditions attached.[289] Thus, the State's own regulatory procedure may have the effect of threatening the survival of DHEC's conditions in the event they are appealed. Without a doubt, the State must provide adequate opportunity for applicants to object to DHEC's proposed decision. Yet the appeal process as it currently stands can be used to defeat entirely DHEC's will and authority to improve riverine conditions. This potential may serve to instill a more cautionary approach than DHEC may want in its attempt to mitigate or reverse the detrimental impacts of dams.

CONCLUSION

Three of the top hydropower energy generators in South Carolina, as well as one hydropower generator in North Carolina that significantly impacts the Pee Dee River in South Carolina, will face FERC relicensing within the next six years. The upcoming expiration of hydropower licenses held by Alcoa in North Carolina, South Carolina's Duke Power, SCE&G, and Santee Cooper arrives amid increasing awareness of the detrimental effects of dams upon riverine ecology, and places their relicensing at a time when they will likely face greater environmental regulation than they have ever experienced before.

As is the case with most FERC licenses, each of these hydropower projects were issued licenses for fifty-year terms, which has sheltered them from any subsequent environmental assessment and mitigation. The Duke and Alcoa dams were licensed before NEPA, the CWA, and the ESA came into being. All four relicensings will face new license conditions concerning natural resource protection pursuant to the 1986 amendments to the FPA that requires FERC to take into account environmental values.

Traditionally, FERC hydropower decision-making rarely recognized the negative impacts of dams upon fish and wildlife, and steadfastly clung to its position that it possessed the sole authority to license hydropower dams. But then, beginning in the mid 1990s, a series of significant court cases opened the door to greater influence by natural resource agencies upon the licensing process.

The *Dosewallips* case upheld state authority to impose water quality conditions upon its section 401 certification of hydropower projects.[290] *American Rivers I* made clear that FERC must include those state water

[289] 18 CFR 4.38(f)(7) (2002); 25A S.C.Code Ann.Regs. 61-101(A)(6) (Supp. 2002).

[290] *See supra* n. 125.

quality conditions within the hydropower license.[291] In *American Rivers II*, the court upheld FERC's discretion in establishing what baseline scenario it would use for NEPA analysis and in treating recommended environmental conditions pursuant to section 10 of the FPA.[292] Nevertheless, the court drew a bright line where FERC had no such discretion. FERC was held to possess no discretion to reject, modify or reclassify any fishway prescribed by federal fish and wildlife agencies under section 18 of the FPA.[293] Thus, for the first time in FERC's history, FERC was made to include environmental agencies in its licensing decisions.

Licensees have bitterly complained that these new environmental conditions placed upon hydropower relicensings cause excessive cost and delay in obtaining a relicense thus threatening hydropower's viability as a competitive source of energy. Environmentalists argue that new environmental conditions are justified in light of the fact that dams have operated for fifty years without adequately compensating the public for the use and degradation of public waterways.

Congress attempted to respond to the hydropower industry's concerns. In 1999, S. 740 attempted to return FERC to its position as sole decision maker in relicensings. This bill was not adopted, but another like-minded bill was introduced in the 107th Congress. S. 517 proposed to weaken natural resource agencies' ability to recommend license conditions. The bill was incorporated into the Energy Policy Act of 2002, but ultimately failed to survive conference committee negotiations. The 108th Congress will likely continue to wrestle with FERC relicensing reform.

In the meantime, FERC has embarked on a process to revise its regulations concerning the relicensing process, with a final rule tentatively complete in fall 2003.

In the midst of this uncertainty over the future of environmental protections within the FERC relicensing process, South Carolina is becoming more aware of its power to affect change in the Duke, SCE&G, and Santee Cooper relicensings and more willing to assert its interests in the relicensing process. DNR plans to seek an instantaneous downstream flow for the three hydropower projects in South Carolina, and will submit comments to FERC requesting the same for the Alcoa project in North Carolina. DNR is also expected to negotiate for expanded public amenities and land conservation within each of the licensed project areas

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[291] *See supra* n. 136.
[292] *See supra* n. 147.
[293] *Id.*

and recommend protection for endangered species and other aquatic life within the reservoirs and downstream. DHEC intends to impose downstream flow conditions within its section 401 certification process. If the FPA is amended to reduce natural resource agency influence on relicensings, DHEC may stand as the only sure means of protecting and improving the health of South Carolina's dammed rivers through its section 401 certification process.

South Carolina has a window of opportunity to improve the ecology of four major rivers in the state. Alcoa, Duke, Santee Cooper, and SCE&G will likely face a streamlined relicensing process through congressional or FERC administrative actions, but at the same time, encounter new, much-needed license conditions addressing environmental concerns. Improving the health of South Carolina's rivers over the new license term of thirty to fifty years inures to the benefit of all South Carolinians, enhancing the State's quality of life, public health, and tourism economy.