## WILL THE COMMISSION'S HYDROPOWER PROGRAM REVIVE IN THE '90s?

#### George C. O'Connor\*

On April 3, 1992, the U.S. Ninth Circuit Court of Appeals in *State of California, ex rel. State Water Resources Control Board* [hereinafter *State of California*] v. *FERC*,<sup>1</sup> in so many words, directed the Commission to pick its head up, come out of the "wood shed" and start once again acting as the central authority for licensing nonfederal hydropower projects in the United States. Prior to the enactment of the Electric Consumers Protection Act of 1986 (ECPA),<sup>2</sup> the Commission for 66 years oversaw the nation's water power potential with uncompromising authority, particularly after the 1946 Supreme Court decision in *First Iowa Hydro-Electric Cooprative v. FPC*.<sup>3</sup>

Since ECPA, the Commission has been very slow and tentative in its approach to licensing hydropower projects under Part I of the Federal Power Act. Some would say that this is an understandable response to what happened to the Commission in 1986. Congress took the Commission to the "wood shed" for its " 'less than satisfactory' history of according environmental factors less weight than power production concerns in licensing."<sup>4</sup> However, the Commission may have overreacted by developing in the years since ECPA a regulatory scheme which prompted one U.S. Senator in 1989 to comment that it resembled "a comedy skit from 'Saturday Night Live.'"<sup>5</sup>

For the last six years, the hydropower industry has found itself in an almost impossible situation. It has been burdened with heavy regulatory requirements laden with a consultation process that frequently engenders adversarial conflicts with public interest groups and state and federal agencies. If, by chance, these conflicts can ultimately be resolved, the process frequently leads to a license order that requires the licensee to comply with yet further regulatory requirements of federal, and in some cases, state agencies beyond what may have been agreed to earlier. The result is a license with so much uncertainty that it takes the boldest entrepreneur to move forward with construction of the proposed project.<sup>6</sup>

6. Sayles Hydro Ass'n v. Maughan, 985 F.2d 451 (9th Cir. 1993). This recent case illustrates the burdens surrounding hydro licensing.

<sup>\*</sup> B.A., Fordham University; J.D., George Mason University School of Law; member of the Virginia State Bar; Legal Adviser to Commissioner Charles A. Trabandt, Federal Energy Regulatory Commission. The views expressed in this article are solely those of the author and do not necessarily express the views of former Commissioner Trabandt or the Commission.

<sup>1. 966</sup> F.2d 1541 (9th Cir. 1992).

<sup>2. 16</sup> U.S.C. § 791a (1988).

<sup>3. 328</sup> U.S. 152 (1946).

<sup>4.</sup> See H.R. REP. No. 507, 99th Cong., 2d Sess. at 17 (1986); See also Platte River Whooping Crane Critical Habitat Maintenance Trust v. FERC, 876 F.2d 109 (D.C. Cir. 1989).

<sup>5.</sup> Oversight Hearing on Implementation of Electric Consumers Protection Act Before the Subcommittee on Water and Power of the Senate Committee on Energy and Natural Resources, 101st Cong., 2d Sess. 138 (1989) (Statement of Sen. Conrad).

Moreover, the Commission has been aggressively asserting jurisdiction over very small unlicensed hydropower projects located on nonnavigable waters.<sup>7</sup> This Commission action comes as a consequence of increasing pressure from federal and state resource agencies to more closely monitor environmental impacts at unlicensed hydro operations. Today, licenses carry with them expensive environmental conditions which often require enhancement measures that attempt to rejuvenate ecosystems which, in some instances, have been dormant for many years. These measures can threaten small businesses that depend on the cheap power produced at these projects.<sup>8</sup>

How did this happen in a decade following one of the most dramatic energy crises in this century? How can this continue in the face of electric demand projections which outstrip existing and planned capacity in some regions of the country, with new Clean Air Act requirements<sup>9</sup> making the production of energy more costly (and inexpensive hydro more attractive), with national and international concern about global warming which will lead to further restrictions on the use of fossil fuels, and with economic pressures for the improved competitiveness of U.S. products and services in international trade?

The road to this regulatory swamp has been colorful. There is plenty of blame to distribute among parties representing all sides of the current hydropower debate. The parties range from some overly enthusiastic developers in the early 1980s who damaged the environment in various areas of the country, to the Commission that allowed such developmental practices at that time, to the wave of concerted opponents to hydropower development who have, for the last several years at least, overstated their case.<sup>10</sup> But rather than engage

8. Under ECPA, the expenses incurred as a consequence of environmental conditions attached to an original or new license are simply the costs of doing business in the hydropower industry today. Congress expressly stated that "Protection, mitigation, and enhancement of fish and wildlife, energy conservation, and the protection of recreational opportunities are a potential cost of doing business for hydropower projects." H.R. CONF. REP. No. 934, 99th Cong., 2d Sess. 22 (1986), *reprinted in* 1986 U.S.C.C.A.N. 2537. For some companies that constructed small hydropower projects years ago to support their production of goods, these expenses may mean the difference between keeping the project and staying in business or abandoning the project and closing the business.

10. See U.S. GENERAL ACCOUNTING OFFICE, ENFORCEMENT OF REQUIREMENTS IMPOSED ON HYDROPOWER PROJECTS NEEDS STRENGTHENING, GAO/RCED-88-60. See also Daniel Kaplan, Is The

<sup>7.</sup> For example, the Commission found that two unlicensed small hydropower projects used to provide power for their owner's factory were required to obtain licenses from the Commission because an electric utility provided 30% of the factory's needs and that utility's generating facilities were linked electromagnetically to those of utilities in other states so that any change in the amount provided by the utility to the factory produced a corresponding change in the grid as a whole. Habersham Mills, 57 F.E.R.C.  $\P$  61,351 (1991), aff'd, Habersham Mills v. FERC, 976 F.2d 1381 (11th Cir. 1992). However, in a more recent jurisdictional proceeding, the Commission affirmed the decision by the Director of the Office of Hydropower Licensing, that refused to extend the Commission's jurisdiction over a 5 KW project that had no physical impact on an interstate grid and which was located on a nonnavigable stream. The sole basis presented by petitioners (National Marine and Fisheries Service, National Wildlife Federation, Idaho Wildlife Federation) for rehearing of the underlying jurisdictional decision for extending Commission jurisdiction over the Guy Carlson project was that the project blocked migration of anadromous fish. The Commission held that Carlson's project was a purely local activity and, therefore, was not jurisdictional. *See* Guy Carlson, 59 F.E.R.C.  $\P$  62,031, reh'g denied, 62 F.E.R.C.  $\P$  61,009 (1993).

<sup>9.</sup> Clean Air Act Amendments, tit. IV, PUB. L. No. 101-549, 104 Stat. 2399, 2584 (1990).

in a finger-pointing exercise to calculate what group or entity is most to blame, it is more productive to assess where the industry is now so that it can realistically assess where it can go in the future.

A good place to start this analysis is in 1978 when Congress enacted landmark energy legislation that initiated, among other things, a "hydro gold rush." What immediately follows is a historical review of this period, which includes discussion of the response of the environmental community and the consequent legal battles fought in the 1980s. I will conclude with some comments on how the Energy Policy Act of 1992 affects the prospects of hydropower continuing as a viable energy source for this nation in the 21st century.

#### I. PURPA AND THE "HYDRO GOLD RUSH"<sup>11</sup>

In response to the energy crisis of the 1970's, Congress decided to facilitate the development of water power. To this end, it allowed the Commission to eliminate time-consuming licensing proceedings by issuing exemptions for certain small power projects. The exemption procedure was established by Congress in the Public Utility Regulatory Policies Act of 1978 (PURPA)<sup>12</sup> and expanded in the PURPA amendments of the Energy Security Act of 1980 (ESA).<sup>13</sup>

In PURPA, Congress added a new section to the Federal Power Act<sup>14</sup> authorizing the Commission to exempt from the licensing requirements of Part I certain small hydroelectric projects, *i.e.*, "conduits."<sup>15</sup> Subsection (c) of the statute provides that besides attaching to each exemption those conditions the Commission itself considers necessary, the "Commission shall consult with the United States Fish and Wildlife Service and the state agency exercising administration [over] fish and wildlife resources of the state . . . and shall include in any such exemption" conditions those agencies prescribe.

12. 16 U.S.C. § 823a (1988).

- 13. 42 U.S.C. § 737 (1988).
- 14. 16 U.S.C. § 823a (1988).
- 15. 16 U.S.C. § 823a (1988) provides that:

(1) is located on non-Federal lands, and

(2) utilizes for such generation only the hydroelectric potential of a manmade conduit, which is operated for the distribution of water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity.

Green Promise Of Hydro Fading To Brown?, THE ENERGY DAILY, Vol. 20, No. 233, Dec. 7, 1992. This short article captures, in a nutshell, the rancorous debate between the hydro industry and its opponents.

<sup>11.</sup> There are several articles describing the circumstances surrounding the surge in entrepreneurial interest in developing hydropower in the late 1970s. One of the more comprehensive articles is M. Curtis Whittaker's, *The Federal Power Act and Hydropower Development: Rediscovering State Regulatory Powers and Responsibilities*, 10 HARV. ENVTL L. REV. 135, 138-43 (1986). Another more recent, shorter, yet informative article was written by Nan Nalder, *Fixing Hydro* — *The Forgotten Renewable*, THE ELECTRICITY JOURNAL, April, 1992. There are some interesting developer observations on the "hydro gold rush" contained in a book by Richard Munson. RICHARD MUNSON, THE POWER MAKERS 161-163 (1985). The term "Hydro Gold Rush" is found in 123 CONG. REC. H8962.

Except as provided in subsection (b) or (c). . ., the Commission may grant an exemption in whole or in part from the requirements of this part, including any license requirements contained in this part, to any facility (not including any dam or other impoundment) constructed, operated, or maintained for the generation of electric power which the Commission determines, by rule or order —

In addition, section 405 of PURPA<sup>16</sup> amended the FPA by directing the Commission to establish expedited procedures to license projects at "existing dams." Section 408 defined "existing dam" as "any dam, the construction of which was completed [by] April 20, 1977 and which does not require any construction or enlargement of impoundment structures (other than repairs or reconstruction) in connection with" the hydro project. Thereafter, in the ESA Congress amended section 405 of PURPA to authorize the Commission to issue, for projects using "existing dams," exemptions "subject to the same limitations . . . as those which are set forth in [16 U.S.C. § 823a(c),(d)] . . . ."

Thus began the "hydro gold rush" which resulted in the filing of thousands of hydropower preliminary permit and development applications at the Commission. By far, exemption applications comprised the largest volume of development applications filed at the Commission. Projects that would have an installed capacity of 5 MW or less and were located on property owned by the person or entity proposing development qualified to be exempt from most of the requirements of Part I of the FPA. This streamlined approach to licensing combined with tax credits provided by Congress during this time<sup>17</sup> proved to be enticing to many prospective entrepreneurs.

There were approximately 1,471 exemption applications filed between 1980 and 1985. The Commission issued 775 exemptions during that time. During that same period there were approximately 5,069 preliminary permits and 430 licenses issued by the Commission. The Commission scrambled to comply with what it believed at the time to be the clear intent of Congress which was to reduce dependence on foreign oil and conserve the nation's source of fossil fuels.<sup>18</sup> Under the circumstances, the Commission's response to the will of Congress was swift and efficient but sometimes overzealous.

For example, in the face of a statute that allowed exemptions from the licensing requirements of Part I of the FPA for projects that use natural water features "without the need for any dam," the Commission determined in a final rule that a concrete structure less than 10 feet high in a stream did not qualify as a dam.<sup>19</sup> Second, when the Commission promulgated its rule granting PURPA benefits for new dams, one of the things said by the Commission in its rule was that there would not be much environmental damage because, among other things, not many applications would be filed.<sup>20</sup> When the Sierra Club petitioned the Commission in Docket No. RM83-69-000 to take another look at its PURPA benefits rule because of the overwhelming number of applications filed, the Commission refused to act.<sup>21</sup>

In addition, the Commission's staff and budget were not adequate to handle the kind of review process necessary to ensure that projects would be built

<sup>16. 16</sup> U.S.C. § 2708 (1988).

<sup>17.</sup> See Energy Tax Act of 1978, 26 U.S.C. § 46 (1978).

<sup>18.</sup> See Idaho Power Co. v. FERC, 766 F.2d 1348 (9th Cir. 1985).

<sup>19. 18</sup> C.F.R. pt. 4 (1983).

<sup>20.</sup> See 34 F.E.R.C. § 61,008, at 61,023 (1986).

<sup>21.</sup> Ultimately, on December 12, 1985, the Ninth Circuit remanded the record to enable the Commission to issue an order on the Sierra Club petition within ninety days from the date of the court order.

in the manner proposed. After issuance, some proposed projects ran into problems that were not fully contemplated, thus causing slight or major adjustments to their construction design. Some of these adjustments were reported and some were not. Monitoring the increased numbers of constructed hydropower projects became a challenge owing to the limited number of personnel at regional offices and the vast areas that the regional offices were required to police.

Violations of exemption and license terms and conditions were reviewed only when these violations were found by regional office inspectors during routine inspections or, as in most instances, when reported by private parties or other state and federal agency officials. Consequently, the Commission's "enforcement program" was understaffed and, regrettably, some developers got away with short cuts in complying with environmental terms and conditions attached to their exemptions and licenses.<sup>22</sup>

Moreover, because of the intense workload and pressure to keep the licensing review process moving, the Commission began shortening its environmental review of the smaller proposed projects. In some instances, the Commission did not prepare any formal NEPA document for a project. Indeed, at one point, in the case of *Olympus Energy Corp.*,<sup>23</sup> the Commission decided to forego environmental review and rely almost exclusively on state and federal agency recommendations.

Many state and federal fish and wildlife officials suffered from the same inadequacies the Commission experienced such as limited personnel and budget, and began to feel frustrated with the manner in which some developers approached construction and compliance with their federal exemptions and licenses. Supported by several natural resource interest groups, the agencies, where possible, began a campaign to challenge the Commission's implementation of its hydropower program. The early campaign achieved some remarkable success. This success paved the way for the comprehensive amendment to the Federal Power Act in 1986.<sup>24</sup>

Summarized below are the primary court decisions that led Congress to believe that a change in Commission attitude toward its environmental responsibilities was necessary.

#### II. THE ANTI-HYDRO BACKLASH

While the Commission was in the thick of the hydro gold rush and trying to get its regulatory act together to meet the challenge, several natural resource interest groups<sup>25</sup> successfully appealed a major Commission rulemaking on "natural water feature exemptions" and several permit and license issuances to the U.S. Courts of Appeals. Some of the most important battles of

<sup>22.</sup> See U.S. GENERAL ACCOUNTING OFFICE, ENFORCEMENT OF REQUIREMENTS IMPOSED ON HYDROPOWER PROJECTS NEEDS STRENGTHENING, GAO/RCED-88-60.

<sup>23. 26</sup> F.E.R.C. ¶ 61,407 (1984).

<sup>24.</sup> See 16 U.S.C. § 791a (1988).

<sup>25.</sup> The most active interest groups were based in the Pacific Northwest. Native american organizations along with the National Wildlife Federation and federal and state fish and wildlife agencies filed most of the licensing appeals in the early 1980s.

the "anti-hydro crusade" were fought in the U.S. Ninth Circuit Court of Appeals.

Without question, 1984 was the most successful year of the anti-hydro crusade. Two Ninth Circuit opinions and one Supreme Court opinion were issued in that year. Each one of those opinions had a significant impact on the Commission's hydropower program because it forced the Commission to reevaluate the manner in which it defined its responsibilities under Part I of the FPA.

On May 10, 1984, the Ninth Circuit issued its opinion in *Tulalip Tribes of Washington v. FERC*,<sup>26</sup> wherein it invalidated a Commission final rule issued in 1982,<sup>27</sup> that authorized case-specific exemptions from licensing requirements for small hydro projects that use "diversion structures" no taller than ten feet and impound no more than two acre feet of water.

The rule was promulgated pursuant to authority enacted in section 408 of the Energy Security Act of 1980.<sup>28</sup> That section of ESA authorized an exemption from the normal hydroelectric project licensing procedures for "any project which utilizes or proposes to utilize natural water features for the generation of electricity, without the need for any dam or impoundment . . . ." (Emphasis added). The court found that the structures authorized by the Commission's final rule "clearly fall within the plain meaning of 'any dam or impoundment." "29

As always, hindsight is 20/20, but it is hard to ignore the damage this Natural Water Feature Rule did to the Commission's credibility with federal and state resource agencies as well as with many legislators and interest groups. The Commission's policy of turning its head whenever a concrete structure under 10 feet was put in the water as part of a 5 MW or less hydropower project made the Commission an easy target for criticism. Clearly, the Commission's credibility was seriously questioned in the Ninth Circuit. On June 7, 1984, not even a month after the *Tulalip* decision, the Ninth Circuit dealt yet another blow to the Commission's burgeoning hydropower program.

In Confederated Tribes and Bands of the Yakima Indian Nation v. FERC,<sup>30</sup> the Ninth Circuit held that the Commission failed to meet its statutory obligation to consider fishery issues prior to issuing a new license to the Public Utility District No. 1 of Chelan County, Washington, for the Rock Island Hydropower Project located on the Columbia River. The court also held that the Commission "acted unreasonably when it issued the license . . . without first preparing an EIS."<sup>31</sup> Accordingly, the court set aside the Commission order issuing the new license. The Commission's efforts to review development applications rapidly were running into serious trouble in the Ninth Circuit.

Meanwhile, on May 15, 1984, the Supreme Court issued its decision in

<sup>26. 732</sup> F.2d 1451 (9th Cir. 1984).

<sup>27.</sup> See 18 C.F.R. pt. 4.

<sup>28. 16</sup> U.S.C. § 2708 (1988).

<sup>29.</sup> TULALIP TRIBES, 732 F.2d at 1454.

<sup>30. 746</sup> F.2d 466 (9th Cir. 1984).

<sup>31.</sup> Id. at 477.

*Escondido Mutual Water Co. v. La Jolla Band of Mission Indians*,<sup>32</sup> where it determined, among other things, that section 4(e) of the FPA requires the Commission to include in every license for a project on a public lands "reservation" such conditions as deemed necessary for the adequate protection and utilization of the reservation by the secretary of the department under whose supervision such reservation falls.<sup>33</sup>

Although the Court found that all such conditions must be reasonable, consistent with the FPA, and supported by substantial evidence, it stated that the courts, not the Commission, are to decide these questions.<sup>34</sup> The Court also stated that if the Commission disagrees with a condition, it may either express its disagreement with the condition when it issues the license or refuse to issue the license altogether.<sup>35</sup> However, the Court emphasized that the secretaries cannot veto the issuance of a license.<sup>36</sup>

The Commission's record in the Ninth Circuit continued to deteriorate over the next several years.<sup>37</sup> In the midst of this barrage of appeals, the Commission made several significant attempts to improve the manner in which it took into account the environmental consequences of the hydropower projects it was licensing.

In late 1983, the Commission began reviewing the need to undertake basin-wide environmental studies which would consider the cumulative impacts of two or more proposed projects on targeted environmental resources. After much internal debate, the Commission, on December 20, 1984, directed its staff to prepare a plan for a "Cluster Impact Assessment Procedure" (CIAP).<sup>38</sup> On April 24, 1985, the Commission adopted a Directive to the Staff (1) concluding that "the CIAP appears to be a reasonable methodology" and (2) ordering its use in the Salmon, Snohomish and Owens River Basins.<sup>39</sup> Although the success or utility of CIAP is still debated in several quarters, <sup>40</sup> the implementation of such methodology in 1985 is testa-

36. See, e.g., Id. at 787, where the Court stated: "Under the FPA, the Secretary, with the duty to safeguard reservations, may condition, but may not veto, the issuance of a license for project works on an Indian reservation." See also Id. at 777, 778, n.21.

37. See, e.g., The Steamboaters v. FERC, 759 F.2d 1382, 1393-394 (9th Cir. 1985) (although the Commission's interpretation of ESA was sustained in this court decision, the court warned that the Commission cannot simply rely on state and local agency recommendations; it is required to evaluate independently the consequences of the project); National Wildlife Fed'n v. FERC, 801 F.2d 1505 (9th Cir. 1986) (Commission failed to adequately explain refusal to require permittees to conduct cumulative studies); LaFlamme v. FERC, 852 F.2d 389 (9th Cir. 1988) (court reversed Commission's decision to grant a license, finding that the Commission had failed to meet § 10(a)'s mandate to consider a "comprehensive plan" of development).

40. See e.g., U.S. Government Accounting Office, Opportunities for Strengthening Hydropower Cumulative Impact Assessments, GAO/RCED-88-82.

133

<sup>32. 466</sup> U.S. 765 (1984).

<sup>33.</sup> This case presents the Commission with several substantive and procedural dilemmas, discussed in some detail in Commissioner Trabandt's dissenting opinion to Order No. 533-A; Order on Rehearing, *Regulations Governing Submittal of Proposed Hydropower License Conditions and Other Matters*, 57 F.E.R.C. ¶ 61,254 (1991), Slip Opinion at 17 (issued Dec. 10, 1991).

<sup>34.</sup> See Escondido Mutual Water Co., 466 U.S. at 777-778, n. 21.

<sup>35.</sup> Id.

<sup>38. 29</sup> F.E.R.C. § 61,402 (1984).

<sup>39. 31</sup> F.E.R.C. ¶ 61,095 (1985).

ment to the Commission's increasing sensitivity to the environmental impacts of its hydropower program.

The Commission, during this time, also began improving the content and quality of its environmental assessments and impact statements. The Commission implemented procedures recommended by the Council on Environmental Quality (CEQ) for the preparation and public review of these documents.<sup>41</sup> However, these efforts proved insufficient to persuade Congress that the Commission had finally figured out how to implement and administer its hydropower program in an environmentally responsible manner. On October 16, 1986, Congress enacted the Electric Consumers Protection Act of 1986 (ECPA).<sup>42</sup>

#### III. ECPA: A CLARIFICATION OF THE COMMISSION'S HYDRO MISSION

During the period when Congress was considering ECPA there were many hearings on hydropower issues held by both the House and Senate. Those who opposed hydropower development were armed with evidence of environmental damage to some of the nation's pristine environments allegedly caused by irresponsible hydropower development and poor enforcement by the Commission of license terms and conditions. Combined with the court decisions referenced above, this evidence presented a persuasive case to Congress that something needed to be done to stem the tide of reckless development along and in our nation's waterways. Congress did respond, but it preserved the Commission's authority to be the ultimate judge of whether a license or exemption should issue and, if so, what license terms and conditions should apply.

The Energy and Commerce Committee of the House of Representatives was particularly critical of the Commission. For example, the House report contains a harsh criticism of the manner in which the Commission implemented its hydropower program under Part I of the FPA:

In short, FERC's treatment under the Federal Power Act  $\ldots$  of  $\ldots$  fish and wildlife, recreation, and other non-power factors has been less than satisfactory.  $\ldots$ 

While recent Commission actions under Chairman O'Connor demonstrate improvement, the Commission has not always displayed sufficient concern for the non-power aspects of hydropower development. Moreover, as Commission members change, so too does FERC's attitude toward these aspects.

.... The Committee believes that the Federal Power Act should be better harmonized with today's environmental values. In reviewing the current provisions of the Act, however, the Committee found that a major rewrite of the Act was not required.<sup>43</sup>

#### Although the statutory amendments recommended in the House report

42. Electric Consumers Protection Act of 1986, Pub. L. No. 99-495, 100 Stat. 1243 (1986).

43. H.R. REP. No. 507, 99th Cong., 2d Sess. 17-21 (1986).

<sup>41.</sup> In 1986, the Commission began an internal review of its environmental regulations that culminated in its adoption, with some minor modifications, of the CEQ National Environmental Policy Act regulations on December 10, 1987. Order No. 486, *Regulations Implementing National Environmental Policy Act of 1969*, [1986-1990 Regs. Preambles] F.E.R.C. Stats. and Regs. ¶ 30,783 (1987) (to be codified at 18 C.F.R. pts. 2, 157, 380).

attempted to share licensing authority equally between the Commission and other resource agencies, those provisions were modified in conference. The force and effect of the final bill was described by Senator J. Bennett Johnston, Chairman of the Senate Committee on Energy and Natural Resources, in remarks made to the National Hydropower Association on March 17, 1987:

The hydro bill gives new power to fish and wildlife agencies in the process of setting license terms and conditions. Many of you are unhappy with these changes. I am a strong believer in environmental protection, but I too would have written the fish and wildlife provisions differently if it had been left solely to me. It was not.

Nevertheless, I believe that the new law does provide a workable framework for environmental review. New hydroelectric development, though more difficult, will take place in the future. I would not have voted for the Electric Consumers Protection Act if this was not the case.

In the face of the myriad consultation requirements that must now be met, two key facts ensure that balance remains in hydroelectric regulation.

First, FERC is still the ultimate judge of what license terms and conditions should apply . .

When all is said and done, FERC decides. That is very important because FERC is the only agency in the hydroelectric licensing process that is charged with taking into account all competing concerns. It is the only agency that is required to take a global view.

Second, . . . [e]qual consideration [of nondevelopmental values] is required, but equal treatment is not.

Senator Johnston's description embodies the compromise struck between the two Houses of Congress and contained in the conference report on ECPA. In a nutshell, ECPA requires that FERC must conduct hydroelectric licensing with "equal consideration"44 to other resource values, in addition to power and development values. The Commission must also review fully and objectively the plans and recommendations of other federal and state resource agencies within their respective areas of expertise. But, to ensure the continued viability of hydroelectric development and operation, the Commission is not required by ECPA to provide equal treatment to other resources nor to be bound by the plans or recommendations of other agencies.

#### IV. ECPA: INTERPRETATIONS AND IMPLEMENTATION — THE EARLY YEARS

As expected, there have been many challenges in interpreting and implementing ECPA. The test for the Commission has been to interpret and implement ECPA in a balanced manner consistent with the Congressional policy objective of equally considering power and nonpower interests while preserving a viable hydropower option.

Since 1985, the Commission's budget has reflected the significantly increased expenses associated with "beefing up" its staff responsible for environmental analysis. For several years, the Commission expanded its environmental review division in its Office of Hydropower Licensing by hiring many qualified scientific and engineering experts in the fish and wildlife area. The

<sup>44. 16</sup> U.S.C. § 797 (1992).

Commission currently employs many experts on matters affecting fish and wildlife, as well as experts on other environmental matters.<sup>45</sup> These experts prepare their analysis of the issues with the input of many other experts in the field, all of whom are both inside and outside of government service.

This analysis, which, as explained above, contains the recommendations of many experts in a particular technical field, becomes the basis upon which the Commission satisfies its legal responsibility under section 10 of the FPA as amended by ECPA. It also is the basis upon which the Commission satisfies its responsibilities under NEPA. In addition, the record must also include the Commission's "independent assessment" as to whether a particular project will be "best adapted to a comprehensive plan for improving or developing a waterway."<sup>46</sup>

The Commission has dramatically upgraded the environmental analysis of all power development applications. Any objective person who has reviewed an initial license, a new license, or an exemption issued by the Commission during the last six years appreciates that the Commission's consideration of environmental issues is more complete today than it was prior to 1986.

Similarly, the Commission has substantially enhanced its "enforcement program." On March 1, 1988 the Commission reorganized its Office of Hydropower Licensing to include a separate Division of Project Compliance and Administration (DPCA). This Division receives approximately 25 allegations of violation per month.<sup>47</sup> Each allegation is thoroughly investigated and brought to closure as required by section 31 of the FPA which was added by section 12 of ECPA.<sup>48</sup>

Yet, despite these aggressive moves to improve its image as a responsible licensing agency, the Commission has shown a remarkable lack of confidence in administering its hydropower program.<sup>49</sup> The repercussions of the Commis-

47. Conversation with J. Mark Robinson, Director, DPCA of the Commission's Office of Hydropower Licensing (Dec. 21, 1992).

48. As of January 1, 1993, the Commission, pursuant to the recommendations of DPCA, has assessed \$3,367,700 in civil penalties against hydro project owners for activities ranging from violations of license terms and conditions to failure to timely file for licenses or exemptions. The Commission, in addition, has sent Notices of "Proposed Civil Penalties" to other hydro project owners for similar violations. These "proposed penalties" amount to \$502,000. It should be noted, however, the May 5, 1992 D.C. Circuit Court of Appeals' decision in Wolverine Power Co. v. FERC, 963 F.2d 446 (D.C. Cir. 1992), vacated Commission Orders No. 502 and 502-A (the Commission's civil penalty regulations). The court agreed with Commissioner Trabandt's dissenting opinion and found that the Commission had no statutory authority to assess civil penalties against owners of unlicensed hydropower projects that have been determined by the Commission to be jurisdictional, and therefore, required by § 23(b) of the FPA to obtain a license.

49. See, e.g., the Commission's "flip-flop" on the Federal Land Management and Policy Act in Henwood Associates, 47 F.E.R.C. § 61,174 (1989), reh'g denied, 50 F.E.R.C. § 61,183 (1990), reh'g denied,

<sup>45.</sup> According to information provided by the Commission's Office of Hydropower Licensing to the House Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations on May 15, 1992, approximately 22% (or 69 employees) of OHL's staff has environmental expertise. See Transcript of testimony given on May 15, 1992, before the House Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations at 119. Also, the average length of service for each member of the environmental staff (which includes both federal and nonfederal service) is about 12 years. See Transcript at 135.

<sup>46.</sup> See Steamboaters, 759 F.2d at 1393-394.

sion's record in the judicial circuits during the early 1980s and the enactment of ECPA in 1986 have substantially affected the manner in which the Commission views its role as the "central licensing authority" for nonfederal hydropower development. The Commission has been extremely skittish in asserting itself in cases where other agencies claim authority,<sup>50</sup> and even in some instances where agencies do not expressly assert such authority.<sup>51</sup>

Consequently, and not surprisingly, many state and federal resource agencies have attempted to assert their independent permitting authority. Indeed, notwithstanding the fact that the Commission currently adopts, without modification, more than 75% of the terms and conditions recommended by fish and wildlife agencies,<sup>52</sup> several of these agencies and some environmental groups have argued that the Commission must accept all the terms and conditions the agencies recommend, and have even gone so far as to claim they have the right to reject a project that, in their view, is unacceptable.<sup>53</sup> Moreover, federal land management agencies have asserted a right to require a licensee operating a project on some portion of federal land to obtain "special use permits" or "right-of-way" permits before constructing the already licensed projects.<sup>54</sup> These permits have, in some instances, included conditions that conflict with conditions contained in licenses issued by the Commission.55

Once again, the courts have been called upon to determine whether the Commission has been properly interpreting the provisions of Part I of the FPA as amended by ECPA. The message from the courts, for the most part, has been clear. The Commission is responsibly implementing the will of Congress and does have the central licensing role.

51. See, e.g., Warren Nelson, 61 F.E.R.C. ¶ 61,069 (1992) (the Commission determined it was compelled by § 4(e) of the FPA to deny license applications because the U.S. Forest Service decided in its management plan to prohibit the development of hydropower in the Boise National Forest in Idaho).

52. On May 15, 1992, Chairman Martin Allday testified before the Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations, U.S. House of Representatives, that the Commission adopts between 90% and 95% of the terms and conditions recommended by state and federal fish and wildlife agencies. See Prepared Testimony of Martin L. Allday, Chairman, Federal Energy Regulatory Commission, May 15, 1992, at 17. See also U.S. GENERAL ACCOUNTING OFFICE, ELECTRIC CONSUMERS PROTECTION ACT'S EFFECTS ON LICENSING HYDROELECTRIC DAMS, GAO/RCED-92-246 (Sept. 1992) wherein it states that overall, the portion of recommendations accepted without modification by FERC increased from about two-thirds prior to ECPA to about three-fourths since ECPA.

53. See comments filed June 13, 1990, by California Department of Fish and Game concerning, Final Rule, Regulations Governing Submittal of Proposed Hydropower License Conditions and Other measures, III F.E.R.C. Stats. and Regs. ¶ 30,921, 18 C.F.R. Pts. 4, 16, 375, 380 (1991). [hereinafter known as the 10(j) Rulel

1993]

<sup>51</sup> F.E.R.C. 9 61,169 (1990), vacated in part, State of California v. FERC, 966 F.2d 1541 (9th Cir. 1992); See also, the Commission's reversal of its "fishway" definition in 57 F.E.R.C. ¶ 61,254 (1991).

<sup>50.</sup> See, e.g., Keating v. FERC, 927 F.2d 616 (D.C. Cir. 1991) (court agreed with Commissioner Trabandt's dissent that Commission erred when it refused to review state revocation of water quality certification pursuant to § 401 of the Clean Water Act (CWA), and ruled that the Commission is at a minimum required to find that state's purported revocation is timely and was assertedly taken in response to changed circumstances pursuant to § 401(a)(3) of the CWA).

<sup>54.</sup> See, e.g., State of California, 966 F.2d 1541.

<sup>55.</sup> See, e.g., Camille E. Held, 42 F.E.R.C. 9 61,032, at 61,219 (1988).

#### V. JUDICIAL REVIEW — TRIAL AND REDEMPTION

ECPA did not change materially, or in any way weaken, the U.S. Supreme Court decision in *First Iowa*. In *First Iowa*, the Court feared that state veto power could easily destroy the effectiveness of the FPA by subordinating to the control of the state the comprehensive planning which the Act provides shall depend upon the judgment of the Commission.

This concern of the Court appears to be as real today as it was in 1946. Indeed, in the years immediately following ECPA, nearly every state participated in a full scale attack, at the Commission and in the courts, against the precedent contained in *First Iowa*. In addition, several state and federal fish and wildlife agencies along with several interest groups challenged the Commission's interpretation of its authority under section 10(j) of the FPA as amended by ECPA. These challenges resulted in several important cases that were decided between the 1990-1992 time frame. Each of these decisions redeemed the theory that the Commission is the "central" nonfederal hydrolicensing authority in this country. What follows is a brief description of these cases.

# A. Rock Creek: Supreme Court finds Congress established a "broad and paramount federal regulatory role" in licensing hydropower development.

In California v. FERC,<sup>56</sup> the Supreme Court reaffirmed its position in *First Iowa* by upholding a 1989 Ninth Circuit Court of Appeals decision that concluded the FPA preempts state law with respect to minimum flow issues. The minimum flow issue was first addressed by the Commission in *Rock Creek Limited Partnership*.<sup>57</sup> In that case the Commission held that California's imposition of minimum flow releases for fishery protection and other purposes is an integral part of the Commission's comprehensive planning and licensing process under section 10(a) of the FPA. As such, the establishment of minimum flows is a matter beyond the reach of state regulation.

The Ninth Circuit affirmed the Commission decision on June 6, 1989. On May 21, 1990, by a 9-0 vote, the Supreme Court held that to find in favor of California would require disturbing *First Iowa* which has "guided the allocation of state and federal regulatory authority over hydroelectric projects."<sup>58</sup> The Court also pointed out that by directing the Commission in ECPA "to consider the recommendations of state wildlife and other regulatory agencies while providing FERC with final authority to establish license conditions (including those with terms inconsistent with the States' recommendation), Congress had amended the FPA to elaborate and reaffirm *First Iowa's* understanding that the FPA establishes a broad and paramount federal regulatory role."<sup>59</sup>

<sup>56. 495</sup> U.S. 490 (1990).

<sup>57. 41</sup> F.E.R.C. ¶ 63,019 (1987).

<sup>58.</sup> California, 495 U.S. at 498.

<sup>59.</sup> Id. at 499. See also Sayles Hydro Ass'n v. Maughan, 985 F.2d 451 (9th Cir. 1993).

#### B. Lee Creek: D.C. Circuit clarifies limits on resource agency authority under section 10(j).

On July 31, 1990, the D.C. Circuit Court of Appeals in National Wildlife Federation v. FERC,<sup>60</sup> issued an opinion denying a petition for review by the National Wildlife Federation (NWF) challenging orders of the Commission granting the City of Fort Smith, Arkansas, a license for the construction and operation of a dam on Lee Creek in Arkansas, near the border of Oklahoma. NWF challenged the Commission's decision on a number of grounds, all of which were rejected by the court.

The court held (1) that the Commission's decision not to consider the potential environmental effects of a possible later expansion of the project was proper under both the FPA and NEPA,<sup>61</sup> (2) that deference was warranted to the Commission's interpretation that section 4(e) of the FPA authorized it to weigh the dam's water-supply benefits against its environmental costs, <sup>62</sup> (3) that the Commission had sufficiently considered the recommendations of various federal and state wildlife agencies under section 10(j) of the FPA, which the court agreed did not give those agencies veto power over the Commission's licensing authority,<sup>63</sup> (4) that the Commission had properly interpreted the terms of the Clean Water Act to require a permit only from the State of Arkansas, the point of the dam's discharge, and not from the State of Oklahoma,<sup>64</sup> and (5) that the Commission's Final Environmental Impact Statement (FEIS) met the standards of NEPA.<sup>65</sup>

#### С. Ohio River Basin: Court affirms Commission issuance of 16 licenses in Ohio Basin and upholds cummulative environmental study.

Undaunted, American Rivers and The Friends of the Earth, along with several state agencies and the U.S. Department of Interior (Interior) challenged the Commission's issuance of 16 licenses for projects located in the Ohio River Basin. On January 10, 1992, the U.S. Court of Appeals for the D.C. Circuit in U.S. Department of Interior v. FERC,<sup>66</sup> affirmed in full the Commission's orders issuing licenses.

The court rejected the contentions of Interior and the State of Pennsylvania that under section 10(j) the Commission was required to conduct studies sought by the fish and wildlife agencies and that failure to do so violated ECPA's mandate of "equal consideration" of the environmental and developmental concerns.<sup>67</sup> Instead, it accepted the Commission's contention that the statute contemplates that the fish and wildlife agency section 10(j) recommendations are to be based on their own studies.<sup>68</sup> The court also

<sup>60. 912</sup> F.2d 1471 (D.C. Cir. 1990).

<sup>61.</sup> Id. at 1474-478.

<sup>62.</sup> Id. at 1482.

<sup>63.</sup> Id. at 1479-82.

<sup>64.</sup> Id. at 1483.

<sup>65.</sup> Id. at 1484.

<sup>66. 952</sup> F.2d 538 (1992).

<sup>67.</sup> Id. at 544.

<sup>68.</sup> Id.

affirmed that section 10(j) does not give the agencies veto power over the Commission's determination of competing interests.<sup>69</sup>

The court additionally rejected the contentions of Interior and various environmental groups that the Commission's determination was not supported by substantial evidence.<sup>70</sup> In this context, it agreed with arguments that the Commission's determinations were supported by a thorough FEIS and that the Commission had discretion to act in the face of environmental uncertainty since its conclusions were based on the FEIS.<sup>71</sup> The court was also persuaded by the Commission's tailoring of licensing conditions to the facts presented, particularly with reopener clauses in the licenses, in the event its environmental predictions turned out to be incorrect.<sup>72</sup> Finally, the court rejected the claims of the State of West Virginia that the Commission's orders violated state prerogatives under the Clean Water Act or were arbitrary under the FPA concerning recreational facilities.<sup>73</sup>

70. U.S. Dept. of Interior, 952 F.2d at 545.

71. Id.

72. Id. at 546-47.

73. Id. at 548. Section 401(a) of the Clean Water Act, 33 U.S.C. § 1341(a) (1988), requires an applicant for any federal permit or license (including a hydropower license) that "may result in any discharge into the navigable waters" to supply the permitting or licensing agency with a certification from the state in which the discharge will originate, that the discharge will comply with state water quality standards. This provision has generated much controversy in the hydropower development community. One of the most controversial issues associated § 401 is whether a state water quality agency can impose broad scope environmental review, and resulting state conditions in areas beyond water quality, upon an application for § 401 certification. Some environmental groups have suggested use of the certification process as a "strong tool for protection of state waters." See, e.g., S. Elizabeth Birnbaum, Clean Water Act Section 401 Provides the Key to Stream Protection in Hydropower Licensing, RIVERS, Vol. 2, No. 2 (April, 1991). However, several state courts have rejected this notion and have limited the scope of a state certifying agency review to determining whether relevant water quality standards would be met. See, e.g., NEW YORK: Fourth Branch Assoc. and the Audubon Society of N.Y. State, Inc. v. N.Y. Dep't of Envtl. Conservation, 550 N.Y.S.2d 769 (Nov. 15, 1989); Niagara Mohawk Power Corp. v. N.Y.S. Dep't. of Envtl. Conservation, Appellate Division, Third Judicial Department No. 65306, (Jan. 7, 1993). PENNSYLVANIA: Commonwealth of Pennsylvania, Department of Envtl. Resources v. City of Harrisburg, 570 A.2d 562 (June 26, 1990). MAINE: Bangor Hydroelectric Co. v. Board of Envtl. Protection, Civ. Action Docket No. CV-90-53 (Me. Oct. 23, 1990). OREGON: Arnold Irrigation Dist. v. Oregon Dep't of Envtl. Quality, 79 Or. App. 136, 717 P.2d 1274 (1986). See also S.REP. No. 72, 102 Cong., 1st Sess. 246 (June 5, 1991) wherein the Senate Committee endorsed the decisions of the aforementioned state court cases. But see NEW YORK: Long Lake Energy Corp. v. N.Y. State Dep't of Envtl. Conservation, 563 N.Y.S.2d 871 (Dec. 6, 1990). CONNECTICUT: Summit Hydropower v. EPA, CU91-050-26-43 (Conn. Super. July 20, 1992). VERMONT: Georgia Pacific Corp. v. Department of Envtl. Conservation, Docket No. 91-530, May Term (Vt. Sep. 14, 1992), petition for cert. filed, (U.S. Dec. 14, 1992) (No. 92-1012). The Commission has stated that it does "not believe that a state should be

<sup>69.</sup> Id. at 545. The Commission has a statutory mandate under § 10(a) and, more specifically under § 10(j), to heed the recommendations of the state and federal fish and wildlife agencies on all matters pertaining to those resources. However, the flexibility the Commission maintains under § 10(j) is essential to strike the proper balance between developmental and nondevelopmental values, as directed by ECPA. The agencies authorized by the FPA to issue terms and conditions are not authorized or equipped to balance all the interests associated with development of our nation's waterways. Their interests, as mandated by their enabling legislation, are, in almost every instance, much more narrow than the Commission's interest, as mandated by the FPA. Consequently, their legal obligations and program responsibilities are fundamentally different from those of the Commission. The Commission is endowed with the authority to "further power development," but only after it independently considers and balances all aspects of the public interest. See California, 495 U.S. at 506.

However, the wounds inflicted on the Commission by both the judicial opinions of the early 1980s and ECPA in 1986 have healed very slowly. Despite these impressive judicial endorsements of the Commission's approach to licensing hydropower development,<sup>74</sup> the Commission still has been reluctant to assert its full authority when challenged by another federal resource or land management agency.

A case on point is *Henwood Associates*.<sup>75</sup> The Henwood case chronicles the epic journey of a hydropower developer through the Commission's current labyrinthine application process. The Commission's failure to decisively and forcefully handle this case illustrates the over cautious manner in which it approached licensing decisions at this time.

### D. Henwood: Ninth Circuit confirms that Commission is central hydrolicensing agency.

Henwood filed its application for minor license for the 900 KW Dynamo Pond Project in January 1986. Construction of this small project located on 8.4 acres of federal land would entail reconstructing an existing dam and the use of an abandoned penstock alignment. Construction activities for such a project usually have minimal environmental impact.<sup>76</sup> On December 23, 1987, the Director of the Commission's Office of Hydropower Licensing (Director) issued a license to Henwood.<sup>77</sup>

For nearly five years, the fate of Henwood's license hung in the balance. Between 1987, when the Director issued the license and April 3, 1992, when the court of appeals finally resolved the matter, the licensee had to contend with a barrage of agency opposition. In all, the Henwood project faced a turbulent passage.

On February 17, 1988, the Commission denied an appeal of the license filed by the California Water Resources Control Board (State Board), which challenged the Director's finding that the State Board had waived water qual-

permitted to use its water quality certification authority to impose conditions that are unrelated to water quality and that conflict with the Commission's licensing decisions." Central Me. Power Co., 52 F.E.R.C. 61,033 (1990).

<sup>74.</sup> There have been at least three other favorable court decisions with respect to the manner in which the Commission is implementing its hydropower program. See LaFlamme v. FERC, 945 F.2d 1124 (9th Cir. 1991)[hereinafter LaFlamme II] (court found that nothing it said in LaFlamme I compelled preparation of an EIS by FERC and that FERC's finding that no EIS was required was reasonable, that the comprehensive analysis in the EA satisfied FERC's comprehensive plan requirement, and that the Yakima decision did not require complete resolution of every issue associated with a hydropower project); See also Platte River Whooping Crane Critical Habitat Maintenance Trust v. FERC, 962 F.2d 27 (D.C. Cir., 1992) [hereinafter Platte II] (Court rejected Trust's claims FERC was insufficiently aggressive or imaginative in interpreting its statutory authority, and found the Trust's interpretation of the Endangered Species Act to be "farfetched"); See also Alabama Power Co. v. FERC, Nos. 91-1466, 91-1534 (D.C. Cir. 1992)(Commission's efforts to satisfy Endangered Species Act requirements were more than what was required).

<sup>75. 47</sup> F.E.R.C. § 61,174 (1989), reh'g denied, 50 F.E.R.C. § 61,183 (1990), reh'g denied, 51 F.E.R.C. § 61,169 (1990), vacated in part, State of California v. FERC, 966 F.2d 1541 (April 3, 1992).

<sup>76.</sup> See John Echeverria, The Electric Consumers Protection Act of 1986, 8 ENERGY L. J. 61, 76 (1987).

<sup>77. 41</sup> F.E.R.C. ¶ 62,284 (1987).

ity certification for Henwood's project under section 401 of the Clean Water Act.<sup>78</sup> The Commission also dismissed an appeal of the California Department of Fish and Game (Cal Fish and Game) which challenged the Director's rejection of Cal Fish and Game's project flow recommendations under section 10(j) of the FPA; the Director had done so because Cal Fish and Game was not a party to the licensing proceeding. On March 18, 1988, the State Board (and others) filed a request for rehearing of the February 17, 1988 order denying appeal.

While the March 18th rehearing request was still pending, Henwood, having some difficulties with the U.S. Department of Interior's Bureau of Land Management (BLM), decided to file on May 25, 1988, a motion with the Commission requesting that it issue a declaratory order finding that BLM had no authority to require Henwood to obtain a right-of-way grant from BLM prior to commencing construction of project works on lands administered by BLM. On July 18, 1988, the Commission found that BLM had no authority under the Federal Land Policy and Management Act of 1976 (FLPMA) to require Henwood to obtain a BLM right-of-way.<sup>79</sup>

The Commission finally addressed the issues in an order granting appeal in part, denying request for rescision and staying license on May 2, 1989.<sup>80</sup> In the May 2nd order, the Commission (1) granted party status to Cal Fish and Game and, on the merits, granted, in part, Cal Fish and Game's appeal of the Director's order; (2) required further negotiations under section 10(j) of the FPA between staff, Cal Fish and Game, and other agencies, regarding the project flow requirements recommended by California Fish and Game; (3) stayed Henwood's license pending further negotiations; (4) deferred a decision on the State Board's March 18, 1988 rehearing request, pending the section 10(j) negotiations; and (5) denied BLM's request to reopen and rescind the Commission's July 18, 1988 declaratory order finding BLM had no authority to require Henwood to obtain a right-of-way permit under FLPMA.

The May 2nd order was, of course, appealed. The Commission responded to that appeal on February 15,  $1990.^{81}$  In its February 15th order, the Commission (1) rescinded (and thereby effectively reversed) its declaratory order issued July 18, 1988, thus requiring a licensed project to obtain right-of-way permits under FLPMA; (2) imposed a seven cubic feet per second minimum flow requirement for Henwood's project pursuant to the second round of section 10(j) negotiations; (3) denied requests for rehearing on the need for a second round of section 10(j) negotiations filed by Henwood; and (4) denied the rehearing request of the State Board concerning water quality certification. Commissioner Trabandt dissented from the Commission's FLPMA reversal.

Henwood and others sought rehearing of the February 15th order. On May 21, 1990, the Commission issued an order denying the rehearing petitions.<sup>82</sup> In that order, the Commission affirmed its rejection of Cal Fish and

<sup>78. 42</sup> F.E.R.C. ¶ 61,187 (1988).

<sup>79. 44</sup> F.E.R.C. ¶ 61,076 (1988).

<sup>80. 47</sup> F.E.R.C. § 61,174 (1989).

<sup>81. 50</sup> F.E.R.C. ¶ 61,183 (1990).

<sup>82. 51</sup> F.E.R.C. § 61,196 (1990).

Game's (and others') claim that it had erred in imposing a minimum stream flow requirement of seven cfs explaining that it "would permit the project both to have an internal rate of return of 13%, and thus allow its development, and to adequately protect aquatic habitat."<sup>83</sup> The Commission also reaffirmed its view that BLM could require Henwood to request and secure a right-of-way permit under FLPMA, and rejected Henwood's claim that the Commission's interpretation of FLPMA was the result of Congressional pressure. The Commission did however, suggest in its order that BLM may have exceeded its authority when it issued a right-of-way permit to Henwood that might prevent construction of the project on economic grounds, but again noted this was "a matter for the courts to decide."<sup>84</sup> Again, Commissioner Trabandt dissented from the Commission's decision to sustain its FLPMA reversal.<sup>85</sup>

At long last, on April 3, 1992, the U.S. Court of Appeals for the Ninth Circuit in State of California v. FERC,<sup>86</sup> issued an opinion substantially affirming, but vacating in part, the orders of the Commission in the Henwood proceeding. In its decision, the court upheld the Commission as to all issues except its determination that the licensee was required to get authorization from BLM for its project.

The court affirmed the Commission's 10(j) rulings both as to substance and procedure. The court agreed that taking a second shot at 10(j) negotiations, because of what the Commission feared might have been a technical flaw in the first round of negotiations, was within "the Commission's discretion" and a reasonable implementation of the statute.<sup>87</sup> The court also upheld the Commission's decision rejecting wildlife agency recommendations, observing that ECPA's requirement of "'[e]qual consideration' [of environmental and developmental factors] is not the same as 'equal treatment,' and equal consideration does not dictate the FERC's acceptance of the result proposed by the fish and wildlife agencies."88 So, once again a reviewing circuit court interpreted ECPA in a manner that rejected mandatory conditioning by other agencies and sustained the Commission's central licensing role.

Most importantly, however, the court reversed the Commission on its interpretation of FLPMA. A majority of the Commission felt compelled to find that BLM had authority to require licensed projects to obtain BLM permits because of the authority FLPMA gives BLM over "public lands." The court did not accept this view. It first reviewed the history of the Commission's exclusive hydroelectric licensing power, noting particularly the Supreme Court's rejection of the contrary view in First Iowa.<sup>89</sup> It further observed that, when FLPMA was passed, the Commission rejected the contention that rightof-way permits under FLPMA were required for licenses and had consistently reaffirmed this interpretation as late as the May 2, 1989 order in this case.

1993]

<sup>83. 51</sup> F.E.R.C. ¶ 61,196 at 61,558.

<sup>84.</sup> Id.

<sup>85. 52</sup> F.E.R.C. ¶ 61,215 (1990).

<sup>86. 966</sup> F.2d 1541.

<sup>87.</sup> Id. at 1547-48.

<sup>88.</sup> Id. at 1550.

<sup>89.</sup> Id. at 1555.

Furthermore, the court analyzed the relevant statutes. In interpreting "public lands" as used in FLPMA, it relied on *Columbia Basin Land Protec*tion Ass'n v. Schlesinger,<sup>90</sup> which had held that the term was used in its traditional sense, *i.e.*, "lands which are subject to 'sale or other disposal under general laws,'... and does not include '[a]ll land, to which any claims or rights of others have attached.'"<sup>91</sup> The court concluded its analysis of the various statutory provisions at issue, as follows:

When the text and histories of the Federal Water Power Act of 1920, the Federal Power Act of 1935, the Federal Land Policy and Management Act of 1976 and the Electric Consumers Protection Act of 1986 are evaluated, it becomes clear that the exclusive jurisdiction of FERC over federal hydro-electric development first created in 1920 was reinforced in 1935 and remains unimpaired by the terms of any necessary inference of the Federal Land Policy and Management Act of 1976. Therefore, the Commission was in error when it held that BLM had authority to issue permits for Henwood's project.<sup>92</sup>

The *Henwood* court's decision on the Commission's general licensing authority, under the FPA, as amended by ECPA, especially with respect to section 10(j), demonstrates that the Ninth Circuit will defer to the Commission both on substance and procedure with respect to hydropower licensing so long as the Commission has followed the guidelines of the statute. Combined with the Commission's relatively recent victories on these issues in the D.C. Circuit, the two courts with the most interest in hydroelectric matters have shown that they are not likely to second-guess the Commission on these issues.

With respect to the Commission's ability to handle responsibly its ECPA mandate to "equally consider" nondevelopmental values, the Commission has proved it can and will meet the letter of the law and, at least in the courts, has redeemed its "sins" of the past. However, in the political arena on Capitol Hill, recent events culminating with the passage of the Energy Policy Act of 1992<sup>93</sup> suggest that Congress is less politically able to forgive.

#### VI. HYDROPOWER AFTER THE ENERGY POLICY ACT OF 1992 — A CONTUNDRUM FOR INVESTORS

In 1989, the hydropower industry complained that licensing costs were too high, lead times too long, risks too great, and profits too small for hydropower to compete for financing dollars with other energy projects.<sup>94</sup> Clearly, regulatory uncertainty and the relatively unpredictable nature of the Commis-

94. See Hearing on S. 544 before the Subcommittee on Water and Power of the Committee on Energy and Natural Resources, 101st Cong., 1st Sess. 149 (1989) (Testimony of Gail Greely, Vice President of the National Hydropower Association); There are two other factors that opponents of hydropower development often point to as having negatively affected the economics of hydropower development over the years. They are: (1) many of the best sites for development have already been developed or are being developed with current projects in the licensing process, and (2) the expiration or repeal of various tax incentives for hydroelectric projects.

<sup>90. 643</sup> F.2d 585 (9th Cir. 1981).

<sup>91.</sup> See California, 966 F.2d at 1557.

<sup>92.</sup> Id. at 1561.

<sup>93.</sup> Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (1992) [hereinafter Energy Policy Act].

sion's licensing program have been a major disincentive to the hydropower development effort.<sup>95</sup>

However, as discussed above, several court cases since ECPA raised expectations among those in the hydropower industry that the Commission would regain confidence in its role as the "central licensing authority" for hydropower development. Moreover, following the release of President Bush's National Energy Strategy,<sup>96</sup> the industry had real hope that the entrepreneurial climate would be further enhanced by Congressional endorsements in the form of legislation that streamlined the regulatory licensing requirements for hydropower development.<sup>97</sup>

Thus, many believed that the appropriate question before the 102nd Congress would not be whether the Commission was correctly implementing the will of Congress which was the question properly asked by the 99th Congress when it considered the enactment of ECPA. The recent court decisions discussed above seem to affirmatively answer that question. In addition, following the Gulf War, it was reasonable to assume that Congress would be more interested in finding ways for the nation to become less dependant on foreign oil and other fossil fuels and would attempt to encourage entrepreneurial interest in developing all renewable energy sources.

However, in politics, "perception" often becomes "reality," and the lobbying effort loosed upon members of Congress by environmental interest groups and states' rights advocates set the stage for debates in the 102nd Congress that often resembled those that took place in the 99th Congress during its consideration of ECPA. Indeed, at one point during a very intense debate in the House, the issue appeared to be whether hydropower would remain at all as an ingredient in our nation's energy mix.<sup>98</sup> Ultimately, Congress adopted an endorsement of the status quo. As a consequence of the "mixed

145

<sup>95.</sup> Uncertainty with respect to future costs undermines the willingness of hydropower developers to aggressively pursue construction of licensed projects. For example, on November 2, 1990, Lynchburg Hydro Associates surrendered its license for a 3.4 MW project. In its application for surrender of license, Lynchburg states: "[D]ue to the inability to negotiate a reasonable wheeling agreement with the Appalachian Power Company and the openendedness of the Fish and Wildlife Service's authority to require [pursuant to § 18] fish passage facilities, it is impossible to finance the project." More such instances are hard to document because applicants do not need to give a reason for withdrawing their applications for license.

<sup>96.</sup> The Bush Administration's Report, The National Energy Strategy, First Edition 1991/1992 was released in February, 1991. [hereinafter Report]. The NES contained strong endorsements for hydropower development. For example, the NES referred to hydroelectricity as the "mainstay" of U.S. renewable energy. According to this document, hydropower is a crucial and continuing part of our energy strategy, and has much potential for growth. The Bush Administration called for an increase in hydro capacity of 22,000 MW by the year 2030 — a large part of this potential would be developed without building new dams.

<sup>97.</sup> The main volume of the Report contained recommendations to streamline the Commission's licensing process to reduce regulatory uncertainty and unpredictability. See Report at 121-23.

<sup>98.</sup> Chairman John Dingell of the House Committee on Energy and Commerce, was the chief sponsor of the environmental provisions of ECPA that forced the Commission to be more receptive to state and federal resource agency recommendations. There has been speculation among some in the industry that his Committee's vigorous oversight of the Commission's implementation of ECPA is one of the key reasons for the slow and cautious manner in which the Commission decides licensing questions. See, e.g., State of California, 966 F.2d at 1551. However, during consideration of the Energy Policy Act of 1992, Chairman

signals" from Congress, investor interest will likely remain in flux until financial analysts have a clearer picture as to how the Commission will react to the licensing adjustments contained in the Energy Policy Act of 1992.

The Energy Policy Act of 1992 contains two separate titles that effect the Commission's regulation of hydropower. Title XVII includes amendments to the FPA dealing with annual charges,<sup>99</sup> fishways,<sup>100</sup> extensions of deadlines for construction of specified hydropower projects,<sup>101</sup> and the exercise of the right of eminent domain by licensees.<sup>102</sup>

Additional Commission related hydropower provisions which do not amend the FPA are included in Title XXIV. This title contains provisions that amend FLPMA by clarifying that the U.S. Forest Service and the Bureau of Land Management have the power to require rights-of-way or special use permits for future hydropower projects licensed by the Commission which involve lands managed by those agencies,<sup>103</sup> prohibit development affecting federal lands within the boundaries of any unit of the National Park System,<sup>104</sup> and establish a third-party contracting program for the preparation of National Environmental Policy Act (NEPA) documents.<sup>105</sup> This title also

100. Energy Policy Act, § 1701(b), 106 Stat. at 3008 (to be codified at 16 U.S.C. § 811 nt). This provision vacates the Commission's current regulatory definition of "fishway" without prejudice to any definition or interpretation promulgated by rulemaking. However, any future rulemaking must have the concurrence of the Secretaries of the Interior and Commerce.

101. Id. § 1701(c). This provision covers four projects in the states of Illinois, Washington, Kentucky, and Idaho. It directs the Commission to report annually to Congress on the status of all Congressional extensions of § 13 of the FPA deadlines.

102. Energy Policy Act § 1702, 106 Stat. at 3009 (to be codified at 16 U.S.C. § 814). This provision amends § 21 of the FPA to prohibit a licensee from using the right of eminent domain to acquire through condemnation land or other property that was owned by a state or political subdivision and was part of any public park, recreation area or wildlife refuge established under state or local law prior enactment. Owing to political problems caused by two projects proposed for development in local parks in Connecticut, there was a good deal of support for curtailing hydropower development in such areas. This provision preserves condemnation authority for state or local lands which were acquired after the enactment of the 1992 Act, thereby addressing the industry's concerns that agencies would abuse this provision by acquiring lands at proposed project sites solely to block new development. If after the holding of a public hearing in the affected community the Commission finds the proposed project is consistent with the purpose for which the lands are managed, future acquisitions will be subject to condemnation.

103. Energy Policy Act § 2401, 106 Stat. at 3096 (to be codified at 43 U.S.C. § 1761). This section appears to be the biggest concession forced upon the industry. Its effect is to overturn the Henwood decision. However, this provision does contain some protection for existing projects. Existing licensed projects that have not obtained right-of-way permits are not required to do so. Licensed projects with existing permits must renew the right-of-way as required by permit terms. This would change if the Commission determines that there will be a use of additional public or national forest lands not already subject to reservation under § 24 of the FPA.

104. § 2402, 106 Stat. at 3097 (to be codified at 16 U.S.C. § 797c).

105. Energy Policy Act at § 2403, 106 Stat. at 3097 (to be codified at 16 U.S.C. 797d). Under the

Dingell was not willing to accept amendments that would have seriously compromised the Commission's hydropower licensing authority. See 138 CONG. REC. H3785-86, H3794 (daily ed. May 27, 1992).

<sup>99.</sup> Energy Policy Act, § 1701(a), 106 Stat. at 3008 (to be codified at 16 U.S.C. § 803). This provision declares that fish and wildlife agencies an other natural and cultural resource agencies are to be reimbursed through annual charges billed to licensees by the Commission for the cost of studies required to meet their responsibilities under Part I of the FPA. It is intended to avoid costly relicensing delays due to inadequate environmental review budgets by ensuring that funds for this purpose will be available to fish and wildlife agencies, subject to appropriations.

includes provisions authorizing the Commission to exempt from licensing certain projects in Alaska,<sup>106</sup> and requiring the Commission to carry out a study analyzing whether jurisdiction over hydropower licensing of projects in Hawaii<sup>107</sup> should be permanently transferred to that state.

Although many in the industry would agree that the constraints imposed by the Energy Policy Act's hydropower amendments to the FPA and FLPMA do nothing to enhance hydropower as an important renewable energy resource, neither did the Act diminish Congress' commitment to ensure that hydropower will remain a fundamental ingredient in our nation's energy mix.

For the hydropower industry, the most significant aspect of this legislation is what was kept out of the Act. In its current form, the Act preserves Commission authority to review the recommendations of resource agencies and decide, after balancing the myriad interests associated with developing water resources, which recommendations best serve the public interest pursuant to section 10 of the FPA. However, Congress' decision to preserve the status quo in this regard was not without rancor.

The Senate appears to have been much more impressed with the Commission's record under ECPA than the House of Representatives. For example, the Senate attempted to streamline the Commission's licensing process by removing mandatory conditioning authority currently held by the Department of Interior pursuant to section 4(e) of the FPA. The Senate was obviously concerned about reports that the current licensing process lacked the degree of certainty necessary to attract investment to support a viable hydropower option.<sup>108</sup>

However, some members of the House of Representatives had a different view. During the debate which took place in the House when it considered very strong amendments introduced by Congressman George Miller of California, the Commission's impressive judicial record since ECPA was largely ignored or disparaged.<sup>109</sup> Several Congressman were openly hostile toward the Commission and the manner in which it managed its hydropower program.<sup>110</sup>

106. Id. § 2407.

108. See S. REP No. 72 102d Cong., 2d Sess. 242 (1991) which accompanied S.1220 stating following: The original concept of hydroelectric licensing under the Federal Water Power Act of 1920 (FWPA) was that the Federal Power Commission (now the Federal Energy Regulatory Commission (FERC)) would be the exclusive arbiter of whether a proposed project is "best adapted to a comprehensive scheme" for development of a waterway and other public uses. However, over the years this concept has been eroded. Section 5301 of this bill is intended to make progress back to the idea of "one stop shopping" for hydroelectric licensing.

National Energy Security Act of 1991, S.1220, Report No. 102-72 (June 5, 1991).

109. See, e.g., 138 CONG. REC. H3784 (daily ed. May 27, 1992) (statement of Rep. Vento) (alleging that the Henwood court "misconstrued the law").

110. See, e.g., 138 CONG. REC. H3784, 3797 (daily ed. May 27, 1992) (statement of Rep. Miller)

147

third-party contracting program established by the Act, the Commission may permit hydropower applicants, at their election, to pay an outside party selected from a list approved by the Commission to prepare environmental assessments and environmental impact statements required under NEPA. This option may be exercised only with respect to license applications filed after the date of enactment.

<sup>107.</sup> Energy Policy Act, § 2408, 106 Stat. at 3100 (to be codified at 16 U.S.C. § 797 nt).

Consequently, the Miller amendments, which were ultimately adopted by the House, contained certain provisions that reflected a distrust of the Commission's approach to licensing hydropower projects. The House bill wanted to restrict the Commission's authority to license projects by making state owned lands off limits and by allowing states to designate river systems as "protected" from any hydropower development.<sup>111</sup> The designated rivers provision would have authorized states to designate streams as recreational and protected, thereby vetoing hydropower development.<sup>112</sup>

In conference, these provisions were ultimately dropped. Despite strong efforts by some environmental organizations and states' rights advocates to get this provision included in the final energy bill, Senate Conferees fought back, demanding of House Conferees that the provision be dropped from the bill. When House Conferees failed to find compromise positions acceptable, the provision was left out. This was clearly a huge victory for the industry. As discussed above, the final bill contains provisions that only mildly effect Commission authority to license projects.

Over the last decade, Congress has taken several hard looks at the Commission's hydropower licensing program. It has had ample opportunity to fundamentally change the manner in which hydropower projects get licensed. Despite numerous aggressive attempts by some environmental interest groups and states' rights advocates to get Congress to delegate significant licensing authority to the individual states and to other federal resource agencies, Congress has consistently endorsed the original mechanism of licensing hydro-

138 CONG. REC. H3794 (daily ed. May 27, 1992) (statement of Rep. Dingell).

<sup>(</sup>FERC is an arrogant agency), (FERC is a terrorist agency); 138 CONG. REC. H3785 (daily ed. May 27, 1992) (statement of Rep. Owens) (FERC as a fox in a hen house); 138 CONG. REC. H3790, 3793 (daily ed. May 27, 1992) (statement of Rep. Vento) (FERC acting in an offensive manner), (FERC as a rogue elephant out of control); 138 CONG. REC. H3792 (daily ed. May 27, 1992) (statement of Rep. DeFazio) (faceless bureaucrats working out of a subterranean cavern); 138 CONG. REC. H3793 (daily ed. May 27, 1992) (statement of Rep. Rahall) (FERC running roughshod over justifiable concerns of states).

<sup>111.</sup> See H.R. 766, 102 Cong., 2d Sess. § 3104, Version 6 (1992). Coordination with Federal Agencies — this provision, added by Congressman Miller of California to the House bill, would have amended § 6(g) of the Land and Water Conservation Fund Act of 1965 by adding a subsection which provided that if a state, as part of a comprehensive statewide plan approved by the Secretary of the Interior, has enacted statutory provisions for the "permanent protection of the natural, ecological, cultural, scenic, or recreational resources of designated segments within that State," and if such provisions prohibit the development of new hydroelectric power projects on such designated segments, then the Commission cannot issue an original license or exemption for a project on such river segment, if the entire project is within the state.

<sup>112.</sup> This provision would have undermined the federal preemption principles that support the Commission's regulation of hydropower by substantially eroding the Commission's jurisdiction over licensing non-federal projects. Interestingly, Chairman Dingell, who fought to defeat the Miller Amendments, suspected that this provision would encourage eleventh hour lobbying efforts by special interest groups to have state legislators veto hydropower development:

If the State legislature does not like what FERC is doing, FERC is getting ready to license a dam, the State legislature at midnight convenes a session, with no notice, and the State legislature then says, "This land is protected. The Federal Government cannot move in and license the construction of a dam or the creation of any kind of energy generating or transmission facilities." Is that good? No; it is not. It allows sneaky misbehavior. I must confess that the fact that this is sanctified by this kind of amendment gives me dark suspicions that may be precisely what is intended here.

power projects — a commission acting as the "central authority" for all proposed non-federal hydropower developments.

Congress' reluctance to erode the Commission's authority to oversee hydropower development carries a clear message of its commitment to get the nation less dependent on fossil fuels. Purchasing energy produced by hydropower projects can also be an attractive option for many utility companies faced with stringent clean air compliance obligations.<sup>113</sup>

Moreover, Congress appears to have appreciated the delicate nature of the Commission's current hydropower program, especially its relicensing program. The Commission's relicensing program has already been through incredible scrutiny after several comprehensive rulemakings since ECPA,<sup>114</sup>

GENERIC RANKING OF ENVIRONMENTAL IMPACTS Weighting is from 0 to 1.0. The most significant environmental damages are represented by 1.0

<b>RESOURCE TYPE</b>	DAMAGE FACTOR*
COAL	.85 +/15
EXISTING NUCLEAR	.70 +/10
OIL	.65 +/10
SOLID WASTE	.60 + /10
NATURAL GAS	.50 +/05
BIOMASS	.50 +/15
GEOTHERMAL	.50 +/15
HYDRO	
1) Outside Protected Areas	.30 +/10
2) Within Protected Areas	Not Permissible
SOLAR	.15 +/10
WIND	.15 +/10
CONSERVATION **	.00
* The environmental damage factors represent the OPUC/	

ODOE study team's best judgment.

\*\* The legislated 10 percent cost advantage afforded to conservation is separate from and not replaced by this resource environmental ranking.

114. There have been several comprehensive rulemakings issued by the Commission since ECPA that impact the Commission's relicensing program. They are: 1) Order No. 481, Interpretation of Comprehensive Plans Under Section 3 of ECPA, 41 F.E.R.C. ¶ 61,042 (1987), Order on Rehearing, 43 F.E.R.C. ¶ 61,120 (1988) (interpretative rule specifies in more detail the types of plans the Commission will consider as  $\S$  10(a)(2) comprehensive plans); 2) Order No. 496, Information to be Made Available by Hydroelectric Licensees Under Section 4(a) of ECPA, 43 F.E.R.C. ¶ 61,124 (Apr. 28, 1988) (rule specifies the information an existing licensee must make available to the public upon notifying the Commission whether it intends to file for a new license, and the deadlines for making the notifications and making the information available); 3) Order No. 513, Hydroelectric Relicensing Regulations Under the Federal Power Act, 47 F.E.R.C. ¶ 61,225 (1989), Order on Rehearing, 49 F.E.R.C. ¶ 61,398 (1989) (rule specifies the procedures and standards that will govern the filing and processing of applications for new license); and 4) Order No. 533, Regulations Governing Submittal of Proposed Hydropower License Conditions and Other Matters, 55 F.E.R.C. ¶ 61,254 (1991) (Final Rule, popularly known as the 10(j) Rule), Order on Rehearing 57 F.E.R.C. ¶ 61,254 (1991) (rule codifies many existing practices of the Commission's hydropower program).

<sup>113.</sup> It is interesting to note that, in at least one state's generic ranking of environmental impacts caused by power projects, hydropower was ranked among the least environmentally damaging projects. See William McNamee, Environmental Aspects of Licensing and Relicensing of Hydropower Projects, Address Before the Northwest Small Hydroelectric Association Seminar, Jan. 28 - 29, 1991:

and the current system in place to handle the difficult processing tasks ahead probably cannot handle another shift in the regulatory environment.

In addition, there is a developing consensus that energy production, and, in some cases, capacity at the many existing projects scheduled to be reviewed by the Commission in relicensing proceedings during the next decade will actually be reduced because of the environmental conditions the Commission will include in the new licenses issued to those projects. Indeed, a fact worth remembering is that the Commission currently adopts, without modification, more than 75% of the terms and conditions<sup>115</sup> recommended by fish and wildlife resource agencies. If mandatory conditioning authority of single resource agencies is broadly interpreted by the Commission or expanded further by Congress,<sup>116</sup> we can expect that energy production and some capacity at existing projects will be reduced even more than currently expected.

It is, however, prudent public policy to keep the hydropower option credible in the years ahead. One way to help ensure that hydropower remains a credible option is to eliminate a key contributing factor to the current malaise in the investor community which is regulatory uncertainty brought on by the unpredictable nature of the current hydro-licensing process. There should be only one agency that is primarily responsible for balancing the many competing interests associated with the use of our nation's waterways.<sup>117</sup> Congress has given this responsibility to the Commission and it should be vigorous in asserting itself as the central licensing authority. The Commission is currently endowed with a broad range of expertise and experience in balancing competing interests. It is clear, as we have seen from the recent court decisions, that the Commission can credibly balance environmental interests with developmental interests.

<sup>115.</sup> See supra note 52 and accompanying text.

<sup>116.</sup> It is unlikely that Congress will attempt any further revisions of Part I of the FPA in the 103rd Congress. However, there is a possibility that current Commission licensing authority could be seriously compromised by Clean Water Act (CWA) legislation. Two United States Senate legislative proposals in the 102nd Congress, S.1081 introduced by Senator Baucus (D-MT) and the Majority Staff Draft (12/31/91), attempted to considerably expand the scope of CWA regulation through amendments to §§ 303 and 304. For example, the S.1081 proposed amendment to § 303 would permit states to evaluate not only whether a proposed federally licensed activity will comply with water quality standards and other effluent limitations (as §§ 401 and 402 currently do), but also whether the proposed activity will allow for the protection, achievement, and maintenance of designated uses included in such standards. This appears to be a significant expansion of the scope of the Clean Water Act regulation, which has traditionally been limited to actual discharges into navigable waters. *See supra* note 73. Under this section, states essentially have free rein to impose virtually any conditions that they deem necessary to protect the designated or existing uses of a body of water.

<sup>117.</sup> Since the passage of ECPA, increased friction has developed between the Commission and other federal and state agencies over what agency has PRIMARY responsibility for conditioning licenses. This friction can and has manifested itself in what can be described as "turf fights." Indeed, members of Congress have also observed this current phenomenon. See S. DOC. No. 544 at page 348. At this juncture, it appears unlikely that the Commission and the various resource agencies will share the same sensitivities toward power development because, first and foremost, the resource agencies legal obligations and program responsibilities are fundamentally different from those of the Commission. See supra text accompanying note 69.

#### VII. CONCLUSION

In the haze created by intense debate about the costs and benefits of hydropower, public officials must not lose sight of the fact that hydropower is a clean, domestic, reliable, renewable, and cost-effective source of electric generation for the nation.<sup>118</sup> The task of the '90s for regulators and legislators is to develop an energy strategy that will ensure an adequate supply of reasonably priced, reliable energy to all American consumers in an environmentally responsible manner. The development of hydropower can and should continue to be an important and viable element in this strategy.

<sup>118.</sup> The hydropower industry boasts that the hydroelectric conversion process is the most efficient way to produce electricity - each kilowatt-hour is produced at an efficiency that is more than twice that of competing electricity sources. The industry also claims that projects can achieve an overall system efficiency in the order of 90 percent. See Repowering Hydro: The Renewable Energy Technology For the 21st Century, A North American Hydroelectric Research & Development Forum, February, 1992, Final Report published September, 1992 at 1-1. This Report emphasizes that research and development is the way to address environmental, economic, and technical issues that effect the industry today. The Report claims that, just in the operations area, \$10 million in research expenditures a year could result in \$125 million worth of energy replacement. Id. at 1-9. However, out of more than \$100 million now being spent by the U.S. Department of Energy on renewable research, less than one percent goes for hydro. Id.