

COMM-OPINION-ORDER, 5 FERC ¶61,019, New England Power Company, Docket No. E-7561, Project Nos. 1904, 1855, and 1982, (Oct. 05, 1978)

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New England Power Company, Docket No. E-7561, Project Nos. 1904, 1855, and 1982

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Order Approving Settlement Agreement Concerning Fish Passage Facilities At Project Nos. 1904, 1855, and 1982 and Approving Preliminary Plans for Fish Passage Facilities at Project No. 1904

(Issued October 5, 1978)

Before Commissioners: Charles B. Curtis, Chairman; Don S. Smith, Georgiana Sheldon, Matthew Holden, Jr. and George R. Hall.

On December 30, 1977, the Commonwealth of Massachusetts filed for Commission ¹ approval a proposed settlement agreement concerning fish passage facilities at three hydroelectric projects on the Connecticut River licensed to the New England Power Company (NEPCO). Proceeding upstream in order, these projects are the Vernon Project, No. 1904, the Bellows Falls Project, No. 1855, and the Wilder Project, No. 1892. The signatories to the settlement agreement are NEPCO, the States of Massachusetts, Connecticut, New Hampshire, and Vermont, the U.S. Fish and Wildlife Service (USFWS), the Environmental Defense Fund, the Massachusetts Public Interest Research Group, Inc., For Land's Sake (FLS), and Trout Unlimited. ²

On January 30, 1978, NEPC filed for Commission approval four sheets of Exhibit S drawings depicting functional plans for construction of fish passage facilities at the Vernon Project. These drawings were filed pursuant to the fish facility settlement agreement referred to above.

BACKGROUND

American shad and Atlantic salmon are anadromous fish native to the Connecticut River. The construction of dams for five licensed projects on the river ³ created barriers to the natural upstream migration of these anadromous fish. Docket No. E-7561 is the result of a 1971 Commission order ⁴

establishing an investigation into the possibility of restoring annual runs of shad and salmon to the Connecticut River and any appropriate measures to be taken at the five licensed projects to aid the restoration effort. The Commission has already provided for modification or construction of fish passage facilities at the Holyoke and Turners Falls Projects, pursuant to earlier settlement agreements.⁵

THE SETTLEMENT AGREEMENT

The settlement agreement before us now sets forth a schedule for the design, construction, and operation of fish passage facilities by NEPCO at Vernon, Bellows Falls, and Wilder. Public notice of

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the settlement agreement was given on February 3, 1978, with March 13, 1978 as the last day for filing protests or petitions to intervene. None was received. Commission staff filed comments on March 13, 1978 seeking to clarify some of the provisions of the settlement agreement. The signatories to the settlement filed a response to staff's comments on July 14, 1978.

1. *Design.*

Section I of the settlement agreement provides the timetable for decision on the facilities at each project.⁶ Final design of the Vernon facilities will begin within 30 days of either approval of the preliminary design by the fisheries agencies and the Commission⁷ or completion of model studies -- whichever comes later -- and be completed within a year. For facilities at Bellows Falls, preliminary design of fish passage facilities will begin before the year ends and will be filed within six months after commencement. Final design will begin 30 days after either approval of the preliminary design by the fisheries agencies and the Commission or the return of 30 adult salmon to the Holyoke Project in a single year -- whichever comes later -- and be completed within nine months. At Wilder, preliminary design will begin by May 1, 1981 and will be completed within six months. The final design steps will be similar to and will follow by two years those for Bellows Falls.

2. *Construction.*

Section II of the agreement contains the schedule for construction of the facilities. The dates are subject generally to timely approval of the final design at each project by the fisheries agencies and the Commission. Section IV provides that any time limits in the settlement agreement may be modified at any time by up to twelve months upon mutual written agreement of the signatories.

The construction schedule in Section II calls for the Vernon facilities to be ready to operate by May 1, 1981. The facilities at Bellows Falls are to be ready to operate within approximately two years after either issuance and acceptance of a new long-term license for the project, or the return of 30 adult salmon to the Holyoke Project in a single year, or May 1, 1981 -- whichever is latest. The Wilder facilities are to be ready to operate within approximately two years after either issuance and acceptance of a new long-term license for that project, or May 1, 1983, or if certain minimum numbers of salmon continue to return to Holyoke, two years after construction is commenced at Bellows Falls -- whichever is latest.

The principal question raised in staff's comments related to the number (thirty) of Atlantic salmon returning to Holyoke that triggers final design and construction of the Bellows Falls fishway. Staff considered this triggering figure in conjunction with the provision that the states may release as few as 10 percent of those salmon to continue migrating upstream after the Bellows Falls fishway is operating.⁸ Staff noted that under these provisions very few fish (as low as three) might be released for upstream migration and spawning. Staff contended that, if only a few salmon were released, it would be unreasonable to expect a significant number to find their way successfully to tributary spawning areas, resulting in the waste of the released fish. In such circumstances, it might be better either to use the 10 percent to augment the 90 percent being collected to establish a brood stock or to increase the triggering number.

In response, the signatories indicated that returning adult Atlantic salmon will be collected for brood stock at fishways on downstream tributaries -- Farmington River and Salmon River -- as well as at Holyoke. Therefore, it is expected that at least 60 fish would be collected for brood stock before construction of upstream fishways would begin. The signatories also stated that the 10 percent release figure is only a minimum, and was included in the agreement of assure NEPCO that when the fishway is completed at Bellows Falls, salmon will be released for passage through it. The signatories further advised that they would not release only a few fish if it appeared that those fish would be wasted. Their response indicates that the actual number of fish released will depend upon the fishery management decisions made by the fisheries agencies. Staff has concurred with the statement of clarification and has encouraged all decisions on the distribution of returning adult fish to be made by the fisheries agencies.

3. Other Fish Facility Provisions.

Section III requires NEPCO to report every other month to the Commission on the status of the work on fish passage facilities at the three projects. Section V permits NEPCO to seek outside sources of funding for the facilities, but provides that failure or delay in securing such funding would not relieve NEPCO of its obligations under the settlement agreement.

Sections VI and VII provide guidelines for the operation of fish passage facilities at the three projects and for the maintenance of minimum flows. IF NEPCO and the States failed to agree on the actual operating regime of the facilities, it would be determined by a panel of three fish biologists (NEPCO, the States, and the Commission would each appoint one). In Section IX, the fisheries agencies and intervenors agree to certain limitations on the construction of further fish passage facilities at the three projects.

4. Erosion.

Finally, Section X of the settlement provides that inclusion of standard Article 19 of the Commission's Form L-3 (See 54 FPC 1817) in any new long-term licenses for the three projects would satisfy all issues regarding possible erosion raised by the intervenors in 1973. We note, however, that

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FLS has taken action that might be interpreted to contradict this provision of the Settlement Agreement partially. On September 5, 1978, FLS filed a motion ⁹ which asks that we not issue a new long-term license for the Wilder Project until a current Army Corps of Engineers' study of erosion along the Connecticut River is completed and the findings have been reviewed. ¹⁰ FLS also moves that we "require implementation of any relevant recommendations regarding the method of operation of the dam that may be made in the Corps study, specifying same in the license." As the sole ground for its motion, FLS states that a license granted before the results of the Corps' study are available:

* * * could only contain the standard erosion clause [Article 19 of Form L-3 (Rev. October, 1975)], which is applicable to all hydroelectric facilities and therefore is abstract and general, whereas if the Commission waits * * * until the recommendations of the completed Corps' study are available, it would spell out specifically in the language of the license the methods of operation that will cause the least erosion in the Wilder Pool.

To eliminate any possible uncertainty about the effect of FLS's motion on the settlement agreement, we believe it proper and desirable to rule on the motion now. We shall deny the motion.

In the first place, standard Article 19 of Form L-3 in itself would retain ample means for us to address any erosion problems the Corps' study might establish. That Article provides:

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

This article's very generality, which FLS seems to find troublesome, is advantageous. Under its provisions we would be able to order NEPCO to take whatever erosion control measures we found necessary upon review of the Corps' study. ¹¹ The Commission could still "spell out specifically" then any changes in "the methods of operation" of the Wilder Project required to control erosion.

In any event, contrary to FLS's belief, in licensing the Wilder Project we would not be limited to inclusion of only standard Article 19. If we should determine on the record before us at the time of any licensing decision that more specific conditions related to the Corps of Engineers' erosion study are suitable for protection of the public interest, we could include an appropriate special article in the license. And nothing in Section X of the settlement agreement purports to restrict our authority to issue special conditions related to erosion. We do not, however, suggest here that we will or will not include any such special article in a new license for the Wilder Project; deciding that now would simply be premature.

Nor should our action in denying FLS' motion be interpreted as suggesting either that we will or will not issue a new license to NEPCO; or that we will or will not issue such a license before the Corps' erosion report is available. ¹² We will decide these matters in the relicensing proceeding, when the time is ripe. Here we decide only that FLS has not shown any good reason for us to postpone licensing of the Wilder Project until after the Corps' erosion report is available. We are well aware of the Corps' erosion

report is available. We are well aware of the Corps' study and have no intention of ignoring its results. We will retain adequate regulatory control to require any measures we find proper to mitigate demonstrated project-induced erosion even if we should license the project before the Corps has reported.

5. Approval of Settlement Agreement.

The settlement agreement is the result of extended negotiations by the signatories to establish a schedule of fish facility construction at these three projects. The agreement provides for an acceptable general method of constructing the proposed fish facilities in stages, as anadromous fish extend their migratory range upstream. Based on our review of the agreement and Staff's comments and the response from the signatories, we believe that the agreement adequately provides for upstream fish passage facilities at Vernon, Bellows Falls, and Wilder, and that the agreement is thus in the public interest and should be approved.

FACILITIES AT THE VERNON PROJECT

Pursuant to the settlement agreement above, NEPCO filed for Commission approval Exhibit S Drawings showing the preliminary design of fish passage facilities at the Vernon Project. Copies of the Exhibit S drawings were sent for comment to appropriate state and Federal agencies on May 11, 1978. The agencies responding ¹³ all commented favorably on the proposed preliminary design.

The proposed fishway at the Vernon Dam was developed cooperatively by NEPCO and the interagency Technical Committee for Fisheries Management of the Connecticut River Basin, with active participation by a Commission staff fishery biologist. The fishway is an "Ice Harbor" type, with a vertical slot-type ladder leading from the gatehouse to the reservoir. This same type of design was used for the Turners Falls fishway, and it has a long record of success in passing salmon and shed at hydroelectric dams in the Pacific Northwest. Commission staff considers this type of ladder to be the most efficient design in passing anadromous fish at large dams and the most economical type of large fish ladder to construct and to operate. The design

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appears to use the existing project structures, insofar as possible, and takes into account the hydraulics of the project's operation to attract migratory fish for collection.

The Exhibit S functional drawings include the general plan for the fish passage facilities, various sections of the fish ladder from the entrance at the downstream face of the powerhouse to the exit into the reservoir, cross sections of a typical weir, and flow diagrams at four different tailwater elevations. Hydraulic model studies of the entrance and exit sections of the fishway are still in progress, but Commission staff states that this work will not result in a significant change in the configuration of the ladder as shown in the preliminary design.

The fish passage facility proposed at the Vernon Project is designed to pass an annual migration of

750,000 American shad and 40,000 Atlantic salmon. (A fish counting station to enumerate migrating fish would be located about midway up the ladder.) NEPCO has indicated that, upon receipt of Commission approval, it is prepared to begin final design of the fish facilities as shown on the functional Exhibit S drawings. Construction is scheduled to start by May 1, 1979. A detailed cost estimate of the facilities has not been completed, but Commission staff reports that preliminary estimates of capital costs discussed during technical meetings have ranged from five to seven million dollars.

The environmental effects of constructing the proposed facilities would be minimal. The work on land would be concentrated in small areas already cleared of vegetation. Construction activities within the meander of the river would be enclosed within cofferdams. The collection galleries would be concrete and would rest on concrete supports anchored to rock foundations. The work would occur during two construction seasons. There would be some construction noise during this period, and possibly some minor turbidity when the cofferdams are installed and removed. These temporary effects would be minor and would cease upon completion of construction. The state and Federal agencies commenting favorably on the Exhibit S drawings are thoroughly familiar with the anadromous fish restoration program and with any environmental consequences of its implementation, but have identified no significant adverse effects from installation of the proposed facilities. For these reasons and considering our staff's independent analysis, we conclude that approval of the functional Exhibit S drawings and the subsequent construction of the fish facilities as depicted by the drawings is not a major Federal action significantly affecting the quality of the human environment.

The proposed Exhibit S drawings conform substantially to the requirements of our Regulations. We find it appropriate and in the public interest to approve the Exhibit S drawings for fish passage facilities at the Vernon Project submitted by NEPCO.

The Commission orders:

(A) The Settlement Agreement filed December 30, 1977, concerning fish passage facilities on the Connecticut River at Project Nos. 1904, 1855, and 1892, is approved and incorporated by reference in this order. New England Power Company shall comply with the provisions of the settlement agreement.

(B) Nothing in this order shall prejudice any past or future Commission findings or orders or any claims or contentions that may be made by the Commission, its staff, or any party or persons affected by this order, in any other proceeding now pending or that may be instituted.

(C) The following Exhibit S drawings showing the preliminary design for fish passage facilities at Project No. 1904, filed January 30, 1978, consisting of four sheets, are approved and made a part of the license for Project No. 1904:

Exhibit S	FERC No.	Showing
Sheet 1	1904 -67	General Plan
Sheet 2	1904 -68	Fishway Sections
Sheet 3	1904 -69	Fishway Sections

1 This proceeding was commenced before the FPC. By the joint regulation of October 1, 1977 (10 CFR 1000.1), it was transferred to the FERC. The term "Commission," when used in the context of action taken prior to October 1, 1977, refers to the FPC; otherwise, it refers to the FERC.

2 The term "fisheries agencies" in this order will be used to refer collectively to the four states and USFWS.

3 The three projects named above plus two others further downstream, the Holyoke (or Hadley Falls) Project No. 2004 and the Turners Falls Project No. 1889.

4 *Holyoke Water Power Co., New England Power Co., Western Massachusetts Electric Co., Docket No. E-7561*, Order Instituting Investigations, Consolidating Proceedings, and Directing that a Hearing be Held, 45 FPC 939 (1971).

5 *Holyoke Water Power Co., et al., Docket No. E-7561*, Order Prescribing Modifications to Fish Facilities and Continuing Proceeding, 49 FPC 1067 (1973); *Holyoke Water Power Co., et al., Docket No. E-7561*. Order Approving Settlement Agreement with Modification (November 8, 1976, 56 FPC 2914).

6 In its comments of March 13, 1978, staff stated its interpretation of these provisions. The signatories concurred in staff's construction in their response of July 14, 1978. We will follow the parties' agreed interpretation.

7 As noted above, NEPCO filed the preliminary design at the Vernon facilities for Commission approval on January 30, 1978.

8 Section VI (C). The agreement contemplates that before releasing any Atlantic salmon above Holyoke, the fisheries agencies will collect the first returning adults in trapping facilities and take them to a hatchery to establish a brood stock.

9 The motion is captioned with reference to both this proceeding and the proceeding on relicensing of the Wilder Project No. 1892.

10 FLS states that: This study is scheduled for completion

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early in 1979, to be followed by a Final Report outlying conclusions about the causes of erosion behind the [Wilder, Bellows Falls, Vernon, and Turners Falls] dams and containing recommendations for any changes in the operations of the dams that may minimize erosion on the banks of the river.

11 Assessment of the Corps' study and recommendations, as well as other relevant matters of record, would clearly be prerequisite to our imposing any particular erosion control measures recommended. Thus, we deny FLS's request that we categorically include in the license for Wilder *any* measures regarding the project's method of operation that the Corps' report might recommend. We will consider the recommendations on their individual merits when the time comes.

12 For instance, should the Corps' report be imminent or issued at the time when we might otherwise be ready to act on the application for license, we might on our own motion decide to consider the implications of the Corps' study before acting on the application.

13 New Hampshire Fish and Game Department, Vermont Agency of Environmental Conservation, Connecticut Department of Environmental Protection, Massachusetts Division of Fisheries and Game, U.S. Department of the Interior, and the Policy Committee for Fisheries Management of the Connecticut River Basin.

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