

GAO

Report to the Chairman, Subcommittee on
Oversight and Investigations, Committee
on Energy and Commerce
House of Representatives

May 1986

ENERGY REGULATION

Hydropower Impacts on Fish Should Be Adequately Considered



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United States
General Accounting Office
Washington, D.C. 20548

**Resources, Community, and
Economic Development Division**

B-222655

May 20, 1986

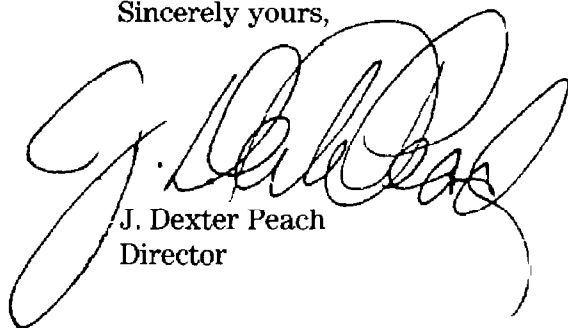
The Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman.

In response to your October 3, 1984, request, this report discusses the Federal Energy Regulatory Commission's (Commission's) handling of fish and wildlife concerns in licensing and monitoring the operations of hydroelectric projects. The report recommends that the Commission Chairman ensure that fish and wildlife agencies have adequate time to respond to Commission decisions and that hydroelectric projects' impacts on fish are adequately monitored.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Commission Chairman; the Secretaries of Commerce, Energy, and the Interior; the Director, Office of Management and Budget; and interested congressional committees. We will also make copies available to others upon request.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'J. Dexter Peach'. The signature is stylized and cursive.

J. Dexter Peach
Director

Executive Summary

The Federal Energy Regulatory Commission, which licenses nonfederal hydroelectric dam projects, has the task of balancing hydroelectric dam development and fish and wildlife interests. Due to concerns expressed by federal and state fish and wildlife agencies in the Northwest (Idaho, Montana, Oregon, and Washington), the Chairman, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce, asked GAO to review

- the concerns about the adequacy of the 30-day period that agencies are given to request a rehearing after the Commission issues orders authorizing the construction and operation of hydroelectric projects and
- the Commission's role in determining that fish-protection measures in licenses are working properly.

Background

The Federal Power Act authorizes the Commission to license nonfederal hydroelectric projects. As of April 1, 1986, there were 258 of these projects in the Northwest, or about 16.5 percent of the total under the Commission's jurisdiction nationwide. As part of the licensing process, the Commission reviews project applications and obtains comments from interested parties. The Commission received a total of 1,117 applications during fiscal year 1985.

When the Commission issues a license, the act gives interested parties 30 days within which to apply for a rehearing if they disagree with the Commission's decision. In addition, the Commission is responsible for ensuring that projects operate in compliance with their license provisions for fish protection. The Commission carries out these responsibilities through an inspection program implemented by its five regional offices.

Results in Brief

Federal and state fish and wildlife agencies do not consider the 30-day period adequate. About one-third or more of the 30-day period can be taken for printing and distribution processes by the Commission and for mailing. The Commission has not increased the length of the period because the Federal Power Act specifies that 30 days be provided. However, an increased amount of time could be provided within the 30-day period by reducing processing and mailing time.

Although the Commission is responsible for determining whether fish-protection measures in licenses are working properly, it does not do so because it does not have the required expertise. Instead, the Commission

relies on state and federal fish and wildlife agencies for these determinations. However, the Commission does not coordinate with these agencies and is generally unaware of the extent these determinations are made or the results thereof

Principal Findings

Adequacy of the 30-Day Period

Federal and state fish and wildlife officials in the Northwest told GAO that they often receive Commission orders 2 weeks after issuance. National Marine Fisheries Service statistics, for example, show that of 8 Commission orders issued in January 1985, 5 required 10 to 12 days to receive, while 3 were received within 6 days. When delays in receiving orders occur, the officials said that they must selectively respond to the projects with the largest impacts and interrupt their operations to prepare timely requests for rehearings. The officials said that they would have enough time within the 30 days if Commission orders are received within 5 days of issuance

GAO confirmed that the Commission orders are not received in the Northwest expeditiously. Once an order is signed, GAO found that it usually takes 3 to 5 days for the Commission to print and process orders for mailing. Average mailing time to and from the west coast is 3 days each way. Consequently, agencies in the Northwest could often have only 19 to 21 days of the 30-day period available for responding.

GAO also found that additional time for requesting a rehearing could be provided. For example, while the Federal Power Act provides for a 30-day period, it does not specify that rehearing requests must be received within 30 days. The Commission could reduce the mailing time by 3 days by (1) accepting a rehearing request if it is postmarked within the 30-day period and/or (2) designating its Portland, Oregon, office as the official receiving point for such requests from the Northwest. The Commission also could prioritize its processing of orders that impact areas of the Northwest. GAO concludes that the Commission should increase the amount of time an agency is provided to respond by considering such alternatives.

Impacts on Fish Populations

While inspecting hydroelectric projects, Commission inspectors ensure that fish-protection measures are in place. Commission headquarters

officials, however, said that the inspectors do not have the expertise to determine how well the fish-protection measures are working. Instead, they said that they rely on state agencies to perform this function because state agencies have the necessary expertise. However, Commission officials are not aware of whether these determinations are actually made and do not initiate discussions of this subject with state officials.

GAO confirmed the Commission's reliance on state agencies by accompanying Commission inspectors to three hydroelectric projects in the Northwest. However, the Commission does not have a formal working agreement with these agencies and, therefore, does not have a basis for ensuring that these agencies are determining whether the fish-protection measures are working properly. State officials in Oregon and Washington said that they check fish-protection and migration measures at hydroelectric dams where they believe this is important. In addition, state officials indicated a willingness to assist the Commission in its license assessment responsibilities. Therefore, the Commission should attempt to develop written working agreements with state agencies to provide for their assistance.

Recommendations

GAO recommends that the Commission Chairman implement alternatives that would allow agencies in the Northwest more time to request a rehearing within the 30-day period, such as expediting the processing and mailing of orders, accepting a rehearing request if postmarked within 30 days of order issuance, and designating the Commission's Portland, Oregon, office as the official receiving point for such requests.

GAO also recommends that the Commission Chairman enter into written working agreements with the fish and wildlife agencies in states with significant fish populations potentially impacted by hydroelectric dams. These agreements should specify (1) to what extent the Commission will rely on the agencies and (2) how the Commission and the agencies will coordinate their respective activities.

Agency Comments

GAO did not obtain official agency comments on a draft of this report. However, the views of Commission officials directly responsible for program implementation were sought during GAO's work and are incorporated in the report where appropriate.

Contents

Executive Summary		2
<hr/>		
Chapter 1		8
Introduction	Objectives, Scope, and Methodology	11
<hr/>		
Chapter 2		14
FERC Should Provide Agencies More Time to Comment on Its Hydroelectric Project Decisions	Hydroelectric Application Process Fish and Wildlife Agencies Need More Time to Respond to FERC Orders Conclusions Recommendation to the Chairman, FERC	14 15 19 20
<hr/>		
Chapter 3		22
FERC Should Ensure That Licensees Comply With Fish and Wildlife License Provisions	FERC's Inspection Program GAO's Observations at Projects Visited Role of State and Federal Fish and Wildlife Agencies Conclusions Recommendation to the Chairman, FERC	22 23 25 26 26
<hr/>		
Tables		
	Table 1.1: Number of Applications FERC Received for Fiscal Years 1978-85	9
	Table 2.1: FERC Orders Issued Between January 17 and 24, 1985, and Mailed to NMFS' Seattle Office	17

Abbreviations

DOE	Department of Energy
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FWS	U.S. Fish and Wildlife Service
GAO	General Accounting Office
NMFS	National Marine Fisheries Service
PGE	Portland General Electric
PPL	Pacific Power and Light Company

Introduction

The Federal Energy Regulatory Commission (FERC), established in 1977 by the Department of Energy Organization Act as the successor agency to the Federal Power Commission, is responsible for regulating electric power, natural gas, and oil in interstate commerce. Specific responsibilities include licensing and inspecting hydroelectric projects, approving the construction of new natural gas pipelines, establishing transportation rates for oil pipeline systems, and regulating wholesale electric and natural gas pipeline rates.

FERC's authority for regulating hydroelectric projects is provided primarily by the Federal Power Act (FPA). Under the act, FERC licenses and inspects nonfederal hydroelectric projects. To obtain approval for such a project, a party submits an application to FERC for either a preliminary permit, license, or exemption.

A preliminary permit authorizes an applicant to conduct engineering, economic, and environmental studies to determine the feasibility of the proposed project. The permit also gives the applicant priority to file for a license on its designated site. After completing the three types of studies, the permittee can file an application for a license to construct and operate the hydroelectric project. Also, an applicant can choose to skip the preliminary permit phase and apply directly for a license. Licenses can be issued for a period of up to 50 years. Before the license expires, a relicense must be applied for and obtained to continue operations. Applications for relicenses are essentially handled the same as those for an original license. An applicant can obtain an exemption from FERC's licensing process if the project's production capacity does not exceed (1) 5 megawatts of power, provided the natural water features of the project are used or (2) 15 megawatts of power if the project involves a conduit.¹

Table 1.1 shows how FERC's hydroelectric workload has fluctuated between fiscal years 1978 and 1985.

¹A conduit is any tunnel, canal, pipeline, aqueduct, flume, ditch, or similar man-made water conveyance used to distribute water for primarily agricultural, municipal, and/or industrial consumption, rather than for just generating electricity

Table 1.1: Number of Applications FERC Received for Fiscal Years 1978-85

Fiscal year	Applications				Total
	Preliminary permit	License	Relicense	Exemption	
1978	36	19	6	2	63
1979	76	20	12	•	108
1980	59	79	7	15	160
1981	1,856	95	5	198	2,154
1982	944	246	21	509	1,720
1983	630	268	6	410	1,314
1984	776	233	17	235	1,261
1985	631	296	18	172	1,117
Total	5,008	1,256	92	1,541^a	7,897

^aIncludes 192 conduit exemption applications

Source: FERC's Regulatory Evaluation and Docketed Information System

The total applications more than doubled from fiscal years 1978 to 1980, with the increase in license applications from 19 to 79 accounting for most of the increase. From fiscal years 1980 to 1981, total applications increased by a factor of 13, with preliminary permit applications increasing from 59 to 1,856. These increases from fiscal years 1978 to 1981 are primarily attributable to the enactment of three laws that encouraged hydroelectric project development. First, the Public Utility Regulatory Policies Act of 1978 encouraged the development of small (5 megawatts of production capacity or less) hydroelectric projects and authorized FERC to exempt small hydroelectric projects from FERC's lengthy licensing process. Second, the Energy Security Act of 1980 broadened the exemption category. Third, the Crude Oil Windfall Profits Tax Act of 1980 allows an 11-percent tax credit for operating hydroelectric projects.

As shown in table 1.1, although the total number of applications received in fiscal year 1985 exceeds the number received in each fiscal year from 1978 to 1980, the total applications decreased after peaking in fiscal year 1981. FERC officials attributed this to the fact that the inventory of available, suitable sites for which applications had not been filed decreased. They added that because there are only a finite number of sites, the large number of applications received in fiscal year 1981 could not be sustained.

The increase in hydroelectric applications has affected not only FERC, but also the other federal and state agencies that review and comment

on the fish and wildlife aspects of the proposed projects. (For this report, we refer to these agencies as fish and wildlife agencies.) Pursuant to the FPA and the Fish and Wildlife Coordination Act, the Department of the Interior's Fish and Wildlife Service (FWS) and the state fish and wildlife agency in whose state a hydroelectric project will be located review hydroelectric applications to determine their potential impact on fish and wildlife and the actions needed to mitigate adverse impacts. Because of its interest in protecting commercial fisheries, the Department of Commerce's National Marine Fisheries Service (NMFS) reviews applications to determine the impact of proposed projects on anadromous fish, such as salmon and steelhead trout, that migrate from the sea up a river to spawn

According to FERC, as of April 1, 1986, the Northwest area of the United States (Idaho, Montana, Oregon, and Washington) had 258 nonfederal hydroelectric projects, about 16.5 percent of the total under FERC's jurisdiction nationwide. In addition, according to FWS and NMFS officials, the Northwest has the largest anadromous fish populations in the contiguous United States. Consequently, FWS and NMFS are concerned about new hydroelectric project proposals in the Northwest because of their potential effect on fish.

The fish and wildlife agencies, initially, have two opportunities to comment on proposed hydroelectric projects. First, FERC requires prospective applicants for a license or exemption to provide such agencies with detailed descriptive, engineering, operational, and environmental data prior to filing their applications with FERC. FERC also requires the applicants to submit these agencies' comments to FERC with their applications for hydroelectric projects. (This process is not required for preliminary permits because an applicant does not gather the detailed data and complete its studies until it receives a preliminary permit from FERC.) Second, when FERC accepts an application, it publishes a notice in the Federal Register generally giving interested parties 60 days to comment on the proposed project. At this stage, interested parties can also become participants in the licensing process by requesting intervenor status.

Parties that become intervenors have a third opportunity to provide their input to FERC's hydroelectric licensing process. For licenses issued by the Office of Hydropower Licensing, intervenors have 30 days to appeal. For licenses issued by the Commission, intervenors have 30 days to request a rehearing on the Commission's decision. Chapter 2 discusses this process in more detail.

In addition to its responsibility for reviewing and approving applications for hydroelectric projects, FERC inspects the approved projects to determine their compliance with structural and operational requirements of a license. FERC's regional offices, which are responsible for conducting these inspections, are located in Atlanta, Georgia; Chicago, Illinois; New York, New York, Portland, Oregon;² and San Francisco, California. During these inspections, the FERC inspectors primarily focus on the projects' human health and safety features. The frequency of inspection for an individual project depends on the degree of hazard it poses to the population downstream from the dam. The degree of hazard a dam poses is determined by estimating the amount of adverse effect that might occur should the dam collapse. FERC officials said that they inspect dams with high-hazard potential annually, significant hazard at least biennially, and low hazard every 3 years.

Objectives, Scope, and Methodology

At the request of the Chairman, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce, and as agreed in subsequent discussions with his office, we reviewed

- the concerns expressed about the adequacy of the 30-day period that federal and state fish and wildlife agencies are given to request a rehearing after FERC issues orders authorizing the construction and operation of hydroelectric projects and
- FERC's role in determining that fish protection measures in licenses are working properly

In undertaking this effort, we learned that the majority of the concerns were about hydroelectric projects in the Northwest. That area has about 16.5 percent of the projects under FERC's jurisdiction and the largest population of anadromous fish in the contiguous United States. As agreed with the Chairman's office, we focused our review on the hydroelectric project operations in the Northwest and their impact on fish. Although our focus was in the Northwest, we also contacted federal and state fish and wildlife agencies in the Northeast.

To fully understand both the concerns expressed about the 30-day period and FERC's role in determining impacts on fish and wildlife, we had discussions and obtained documents from officials of (1) FERC's

²FERC's Portland regional office began operations on November 1, 1985. It replaced FERC's regional office in Fort Worth, Texas. FERC made this change because its inspection workload had decreased in the Southwest and increased in the Northwest.

Office of Hydropower Licensing in Washington, D.C., and its regional office in San Francisco, California, (2) the Department of the Interior's Fish and Wildlife Service in Washington, D.C., and its regional locations in Concord, New Hampshire; Boston, Massachusetts; and Portland, Oregon, (3) the Department of Commerce's National Marine Fisheries Service in Washington, D.C., and its regional locations in Oxford, Maryland; Gloucester, Massachusetts; Portland, Oregon; and Seattle, Washington, (4) fish and wildlife agencies in Maine, Massachusetts, Oregon, and Washington, and (5) the American Public Power Association and the Northwest Power Planning Council. Also, at the Chairman's request, we talked with a representative of the Audubon Society, Friends of the Earth, Friends of the River, National Wildlife Federation, and the Sierra Club to discuss their interests in FERC's hydroelectric licensing program.

In addition, we reviewed pertinent laws, regulations, policies, and procedures of the various federal agencies involved with hydroelectric projects to determine their authorities and how they apply those authorities. We also reviewed the testimonies of FERC, FWS, NMFS, and several special interest groups given before the Subcommittee on Energy Conservation and Power, House Committee on Energy and Commerce, between September 1984 and July 1985 to obtain an indication of the types of concerns those entities have expressed about FERC's hydroelectric licensing program and its responses to those concerns.

To address the issue of the adequacy of the 30-day period, we reviewed FERC's procedures for issuing orders and statistics about this period. We also obtained copies of the U.S. Postal Service mailing standards and discussed with Postal Service officials in Washington, D.C., the average amount of time it takes correspondence to go from a post office on the east coast to a post office on the west coast. We also discussed with a Federal Register official the amount of time required to have orders placed in the Federal Register, printed, distributed, mailed, and received by west coast entities. We also discussed these matters with FERC, FWS, and NMFS officials in Washington, D.C., and at the regional locations we visited.

To address FERC's role in determining that fish-protection measures in licenses are working properly, we discussed (1) the extent of FERC's expertise about fish and wildlife matters, (2) FERC's coordination with fish and wildlife agencies, and (3) these agencies' inspection practices with officials at FERC headquarters and at FERC's regional office in San Francisco, California, and with the FWS, NMFS, and state fish and wildlife agency officials previously identified. We accompanied FERC officials on

visits to three hydroelectric projects to observe the extent to which and how FERC monitors fish enhancement, protection, and mitigation provisions. We also reviewed copies of FERC's inspection reports on those three hydroelectric projects to determine the extent of FERC's involvement in determining whether fish-protection measures in licenses are working properly.

We discussed our findings with agency program officials and have included their comments where appropriate. However, in accordance with the requester's wishes, we did not obtain the views of responsible officials on our conclusions and recommendations, nor did we request official agency comments on a draft of this report. With that exception, our review was performed in accordance with generally accepted government auditing standards. Our work was performed from October 1984 through December 1985.

FERC Should Provide Agencies More Time to Comment on Its Hydroelectric Project Decisions

Pursuant to the FPA, those parties with intervenor status may apply to FERC for a rehearing of their concerns within 30 days after the Commission's issuance of an order licensing a hydroelectric project. In our opinion, this is a particularly important phase in FERC's regulatory process. It is the final opportunity for intervenors to present their views to FERC. FERC requires that rehearing requests be received at FERC headquarters within 30 days of the date on which the Commission signs the order.

Because of the time FERC needs to process and mail its orders and the return mailing time, fish and wildlife agencies in the Northwest point out that they are often not provided a full 30 days to review and respond to FERC orders. Since 1983, federal fish and wildlife agencies in the Northwest have told FERC that the time they have to comment is less than 30 days, and in some cases, does not provide sufficient time for them to review and respond to FERC's orders. Officials of these agencies said that, as a result, there have been instances where FERC rejected their requests for rehearings because the requests were received after the 30-day period. We believe FERC may be able to take steps to provide these agencies more of the 30-day period in which to review the FERC order and prepare an application for rehearing.

Hydroelectric Application Process

Fish and wildlife agencies have several opportunities to participate in FERC's hydroelectric licensing process. First, prior to filing an application with FERC, a prospective applicant has to consult with appropriate federal and state fish and wildlife agencies. The prospective applicant must provide these agencies with detailed data about the proposed project. When the applicant files its application with FERC, it must also submit (1) a copy of the comments received from the fish and wildlife agencies and (2) an explanation of how the comments were addressed in the application.

When FERC accepts an application, it publishes a notice to that effect in the Federal Register and mails such notice to fish and wildlife agencies. This notice gives fish and wildlife agencies a second opportunity to review the application to determine how the applicant addressed their pre-application comments. The fish and wildlife agencies may submit their comments on the FERC notice and/or request intervenor status. Intervenor status allows the fish and wildlife agencies to become a party to all subsequent events, including receiving copies of all correspondence between FERC and the applicant. However, the agencies generally do not know how their comments have been resolved until an order is

published in the Federal Register and FERC mails a copy to the fish and wildlife agencies announcing its decision on the proposed hydroelectric project.

If the agency obtains intervenor status, it has a third opportunity to respond to FERC's hydroelectric licensing process. Intervenors have 30 days from the date the Commission signs an order to have their requests for a rehearing on the Commission's decision delivered to FERC. The 30-day rehearing period is mandated by law and cannot be extended by FERC. Section 313(a) of the FPA provides that,

"Any person, State, municipality, or State commission aggrieved by an order issued by the Commission in a proceeding under this chapter to which such person, State, municipality, or State commission is a party may apply for a rehearing within thirty days after the issuance of such order "

The act requires that a request for a rehearing include the reason(s) why the requester believes a rehearing is necessary.

Fish and Wildlife Agencies Need More Time to Respond to FERC Orders

Since 1983, federal fish and wildlife agencies in the Northwest have told FERC that the 30-day deadline for requesting a rehearing on a Commission-issued order does not allow them sufficient time to respond. An FWS official in the Northwest told us that they had received FERC orders as much as 2 weeks after issuance. The official said that this delay in receiving FERC orders coupled with the large volume of hydroelectric project proposals—as of October 21, 1985, there were about 242 hydroelectric project proposals pending in the Northwest—causes them to interrupt their other activities in order to comment on FERC orders within the 30-day period. The official said that FWS only had time to comment on those hydroelectric project proposals that will have the most impact on fish populations. The official also said that, as a result of delays in receiving the orders, they have difficulty reviewing the orders and commenting or requesting a rehearing within the 30-day period. The official said that their requests to FERC for extensions of the 30-day period were rejected and that they have had their rehearing requests hand-carried to FERC to meet the 30-day deadline. The official said, however, that the 30-day period would probably be adequate if they received orders within 5 days of issuance.

State fish and wildlife agency officials in Oregon and Washington also told us that the 30-day period did not allow sufficient time for their

review of FERC orders. They also cited the volume of hydroelectric project proposals pending in the Northwest coupled with receiving FERC orders 2 weeks after issuance as the major reasons for their difficulty in commenting on orders within the 30-day period. As a result of these constraints, the officials said that they prioritize the FERC orders, address only those they believe will have the greatest impact on fish populations, and, on occasion, have used express mail to deliver their rehearing requests to FERC. However, the officials agreed that the 30-day period would probably be adequate if they received the orders within 5 days of issuance.

The NMFS Seattle office has also contacted FERC on several occasions about not receiving some FERC orders and receiving others too late to respond within the 30-day period. In May 1984, NMFS wrote to FERC regarding its April 1984 request for a rehearing on a hydroelectric project that was rejected because it was late. NMFS pointed out that the reason it was late was because it had not received a copy of the order. Rather, it had learned of the order through a third party, a utility representative. NMFS also told FERC that there were other orders issued within the past 6 months for which NMFS had not received copies, and still other orders which were received about 2 weeks after issuance, thereby not providing adequate time for review and response. Although NMFS could not provide the specific number of times this had occurred, beginning in 1983, NMFS officials had orally told FERC about these problems several times, but FERC had not taken any corrective action.

The NMFS officials told us that FERC did not take any action on its May 1984 letter until January 1985. On September 11, 1984, the Subcommittee on Energy Conservation and Power, House Committee on Energy and Commerce, held a hearing on FERC's hydropower processes. At the hearing, NMFS testified about its nonreceipt and late receipt of FERC orders. In response to the Subcommittee's request, in October 1984, NMFS provided the Subcommittee with details about their problems. In January 1985, FERC asked the NMFS Seattle office to record the dates it received the FERC orders to be issued over the next several weeks. NMFS did this, and in March 1985 wrote to FERC providing the following information on the FERC orders it had received. (The NMFS Seattle office had received all FERC orders issued during this period pertaining to areas of the Northwest.)

Chapter 2
FERC Should Provide Agencies More Time to
Comment on Its Hydroelectric
Project Decisions

**Table 2.1: FERC Orders Issued
 Between January 17 and 24, 1985, and
 Mailed to NMFS' Seattle Office**

Order number	FERC issuance date	NMFS date of receipt	Days between issuance and receipt
8229	1/17/85	1/28/85	11
8194	1/17/85	1/28/85	11
7737	1/17/85	1/29/85	12
8156-57	1/18/85	1/28/85	10
7899	1/18/85	1/28/85	10
935	1/23/85	1/29/85	6
7076	1/23/85	1/29/85	6
8461	1/24/85	1/28/85	4

Source NMFS

As shown in table 2.1, the elapsed time between FERC issuance and NMFS receipt ranged from 4 to 12 days. (It should be noted that, as discussed in the next paragraph, an additional 3 days is needed for mailing NMFS' response to FERC headquarters in Washington, D.C.) In its response to the Subcommittee, NMFS restated its concern that the 30-day period was not adequate for its review and response because it was receiving the orders about 2 weeks after issuance. NMFS officials told us that this time restriction causes them to either prepare a quick response or selectively respond to those orders that will have the most impact on fish populations.

Because of the concerns expressed by the fish and wildlife agencies about FERC's 30-day period for orders, we reviewed FERC's procedures for processing and mailing its hydroelectric project orders to fish and wildlife agencies in the Northwest. According to a FERC official, after the Secretary of the Commission signs an order, it usually takes 3 to 5 days for FERC to print and process an order for mailing. It takes an average of 3 additional days for an order to reach the Northwest by first class mail service. (According to Postal Service standards, 90 percent of the first class mail sent from Washington, D.C., takes 3 days to reach the west coast.) In addition to these 6 to 8 days, another 3 days of the 30-day period are generally used in mailing the fish and wildlife agencies' response from the Northwest to FERC headquarters in the east. These statistics are consistent with those NMFS provided, which are shown in table 2.1

We discussed the results of our review of FERC procedures and the fish and wildlife concerns with FERC officials. FERC officials agreed with the

results of our review and recognized that interested parties do not have the full 30-day period because of the processing and mailing time. We asked them whether they had considered any alternatives which would give the fish and wildlife agencies in the Northwest more of the 30-day period. Although the FERC officials recognized the constraints that the 30-day period imposes on the fish and wildlife agencies in the Northwest, they told us that they have not considered any alternatives to the current processes and procedures.

The FERC officials pointed out, however, that since October 1985 FERC has sent the environmental assessments on each proposed hydroelectric project to all interested parties, including the fish and wildlife agencies. Therefore, these agencies will know how the FERC staff had handled their comments before FERC issues the order on the project. Although this process might provide the agencies with timely information, we believe that it is too early to determine how much this process will help the agencies. The fish and wildlife agencies in the Northwest told us that although this process might help them, it will not resolve their concerns because it only represents the FERC's staff position, which the Commission could change. Therefore, they still have to await FERC's order before beginning to prepare their response.

We discussed alternatives for providing agencies in the Northwest more time to respond to FERC's orders with officials in the Office of Hydropower Licensing. The officials agreed that although they are bound by law to the 30-day period, there may be alternatives to give these agencies more of the 30-day period. However, the officials said that FERC has not determined what the alternatives might be. We asked if FERC had considered expediting its processing of such orders by prioritizing their printing and express mailing copies directly to its Portland office where the fish and wildlife agencies would have more timely access to them. We also asked whether FERC had considered changing the due date from receipt at FERC headquarters to the postmark of the rehearing request. The officials said that they had not considered making such a change and that, although this appeared feasible for state agency requests, it would not be feasible for federal agencies because their requests are not postmarked. They did say, however, that designating their Portland, Oregon, office as the official receiving point might help provide more time for the federal agencies to respond.

An official in the Office of Hydropower Licensing said that there are other ways interested parties might obtain copies of FERC orders. For example, the official pointed out, that the orders are available for

inspection at FERC offices in Washington, D.C. Also, an interested party can telephone FERC for a daily recording of FERC actions taken on orders, or could subscribe to a service which lists FERC actions.

In December 1985 we discussed with NMFS officials in Seattle and Portland their concerns about receiving and responding to FERC orders within the 30-day period. NMFS officials said that although they are now receiving all the FERC orders, they would need to receive an order within 5 days of issuance in order to readily respond within the 30-day period. Concerning FERC's suggested alternatives for learning of the orders, NMFS officials in Portland and Seattle said that FERC orders on file in Washington, D.C., would not give them quicker access to the orders. As for FERC's daily recording of actions taken, the officials said that the recording does not provide enough detail to determine what action FERC had taken on their previously submitted comments. We called FERC's daily recording and found that it provides the name of the applicant, FERC's assigned project number, type of application/order, and action taken. As NMFS officials had stated, the daily recording does not include any specifics about how fish and wildlife concerns were handled by FERC or the applicant. Concerning the subscription service, NMFS officials said it would have to be received more quickly than FERC's mailings to be beneficial. According to an official of the firm that publishes FERC's subscription service, the firm cannot provide the data on FERC's orders sooner than FERC's direct mailing because (1) the firm must wait for a copy of FERC's orders before they can print it and (2) the firm's report of FERC actions is published weekly.

Conclusions

Since 1983, federal and state fish and wildlife agencies located in the Northwest have told FERC that the time they have during the 30-day period is not sufficient for their review and comment. We reviewed statistics about the 30-day period and found that the agencies in the Northwest could often have only from 19 to 21 days available to review and respond to the FERC orders. FERC uses 3 to 5 days for printing and processing an order and 6 days are taken for mailing time to and from the Northwest. As a result, federal and state fish and wildlife agencies have told us that they have to interrupt other activities and selectively respond to those orders that will have the most impact on fish populations.

FERC officials told us that the FPA specifies a 30-day period for interested parties to respond. We recognize that the law specifies a 30-day period, but we also believe that FERC could implement alternatives to provide

Chapter 2
FERC Should Provide Agencies More Time to
Comment on Its Hydroelectric
Project Decisions

fish and wildlife agencies in the Northwest more of this period to respond. Some possible alternatives include expediting FERC's processing and mailing of these orders, accepting a state agency's request for rehearing if postmarked within 30 days, and designating its Portland, Oregon, office as the official receiving point for such requests rather than requiring receipt at FERC headquarters within 30 days

Recommendation to the
Chairman, FERC

To ensure that federal and state fish and wildlife agencies in the Northwest have sufficient time to review and respond to FERC's orders on hydroelectric projects, we recommend that the Chairman, FERC, have the Director, Office of Hydropower Licensing, implement alternatives which would allow interested parties more time within the 30-day period. Such alternatives might include expediting the processing and mailing of orders impacting the Northwest, accepting a rehearing request if postmarked within 30 days of issuance, and designating its Portland, Oregon, office as the official receiving point for such requests

FERC Should Ensure That Licensees Comply With Fish and Wildlife License Provisions

FERC is responsible under the FPA for inspecting nonfederal hydroelectric dams to ensure that such dams are operated and maintained in compliance with license or exemption conditions, including fish and wildlife provisions. During these inspections, FERC inspectors primarily focus on human health and safety conditions. Although they observe fish-protection measures, FERC officials said that the inspectors generally do not have the technical expertise to determine whether the fish-protection measures are working properly. FERC officials said that although no working agreements exist, they rely on state fish and wildlife agencies to make these determinations. However, FERC officials are not aware of whether or how the states make these determinations and have not discussed them with the state fish and wildlife agencies. Therefore, even though FERC is responsible for determining that fish-protection measures are working properly, it does not fulfill this responsibility itself, nor does it take steps to assure that the state agencies do it. During our review, we found evidence that the fish and wildlife agencies in two states are involved in reviewing the impact of hydroelectric dam operations on fish. These agencies indicated a willingness to assist FERC in fulfilling its fish-protection responsibilities. We believe that FERC should establish and document working agreements with these agencies, including provisions for reporting, to ensure that licensed projects are not adversely impacting fish.

FERC's Inspection Program

Under provisions of the FPA, FERC has established rules and regulations to protect life, health, and property. Also under the act, fish and wildlife agencies provide terms and conditions which are included in the license as a means of protecting fish and wildlife. To ensure compliance with these license terms and conditions, FERC periodically visits hydroelectric dams under its jurisdiction. The frequency of FERC's visits ranges from 1 to 3 years for operating dams, which is based on the dam's potential hazard to the human population downstream.

FERC headquarters officials and regional inspectors told us that their inspections focus primarily on human health and safety conditions. As such, FERC inspectors concentrate on dams, spillways, hydraulic control equipment, and major damage due to floods. In addition, the inspectors said that they determine whether the operator is complying with license conditions to protect fish and wildlife by observing whether fish ladders and screens are in place and reviewing operator-maintained water flow records.

Officials in the Office of Hydropower Licensing told us, however, that the federal and state fish and wildlife agencies are better qualified to determine whether fish protection measures are working properly. These officials also told us that FERC generally is not involved, unless it is requested, in discussions and/or correspondence between the operators and fish and wildlife agencies concerning fish protection during dam operations. The officials said that FERC is generally not aware of how well these fish protection measures are working. The officials added that because these situations involve technical aspects for which FERC does not have expertise, FERC does not get involved or monitor such situations. FERC officials also told us that there is no documented working agreement, such as a memorandum of understanding, between FERC and the fish and wildlife agencies, detailing each agency's duties for ensuring licensees' compliance with the terms and conditions of their licenses.

GAO's Observations at Projects Visited

In addition to our discussions with FERC headquarters officials, we accompanied FERC's San Francisco office regional engineer and an inspector to three different dam projects located in the states of Oregon and Washington. We visited projects in these two states because, as requested, we focused our review on the Northwest area, where about 16.5 percent of the projects under FERC's jurisdiction are located. From these visits we wanted to determine whether the inspector's knowledge of and involvement in fish aspects of the licensees' operations were the same as described to us by FERC headquarters officials. We found that they were. During our visits we found that the inspectors focused on inspecting dams' structural and operational features relating to human health and safety.

The following briefly discusses our observations at Portland General Electric's (PGE's) Willamette Falls Dam and North Fork Project both located in Oregon and Pacific Power and Light Company's (PPL's) Merwin Dam Project located north of Portland in Washington.

- At the North Fork Project, we observed fish gathering at the fish ladder and in an area where fish are held for Oregon Department of Fish and Wildlife personnel to collect, count, and classify by size and species before the fish are allowed to continue migration. PGE personnel told us that Oregon personnel visit the dam regularly to perform these duties.
- At the Willamette Falls Dam, we observed Oregon's method of monitoring fish migration using a camera that is automatically activated

when each fish passes a certain location in the fish ladder. State personnel visit the site every 48 hours to collect the film which is used to count and classify fish by size and species. This type of monitoring permits the state to gather statistics on migrating fish which aid in determining any change in patterns or numbers.

- At the Merwin Dam Project, we observed a holding area for migrating fish. Because Merwin Dam is more than 176 feet high, trapping and transporting migrating fish is the only way to get them up stream from the dam. The Merwin Dam personnel told us that state personnel count and transport the fish.

Even though the state fish and wildlife agencies were heavily involved in protecting fish at these three projects, FERC was not aware of how the states' activities were ensuring the protection of the fish populations. San Francisco FERC personnel told us, with regard to fish activities, that they did not routinely become involved in either the state visits and monitoring or the resultant state reports, analyses, and/or discussions with operators. This lack of FERC involvement was illustrated by a situation we learned of during our visit to the Willamette Falls Project. This project was operating at the time of the year prohibited by a license condition because of fish migration. We brought this condition to the attention of both FERC and PGE personnel. PGE personnel told us that the state had concurred in the dam operating at that time of year because experience had shown that operation would not cause any hazard to fish. FERC officials told us that although they knew of the agreement, they had not participated in the discussions leading up to it. Also, FERC had not received a copy of the agreement. The FERC officials agreed that they should have a copy of the agreement and attach it to the license. In November 1985, the FERC official responsible for inspecting this project told us that they had received copies of the agreement.

FERC personnel told us that both Washington and Oregon play a very active oversight role at hydroelectric dams. They said that state personnel are not necessarily at every dam, but are at those dams that the states believe need attention to ensure the protection and enhancement of fish populations. The personnel's presence is more frequent when fish are running either up or down stream. Further, FERC officials told us that other states also have their personnel participating in the oversight of hydropower dam operations to ensure the protection and enhancement of fish. They said that this type of involvement is needed because states' objectives and goals, such as those to protect fish, may differ from those of hydropower dam operators, such as the continual production of electricity. Also, FERC officials said that the state personnel visits

to dam sites enable them to gain assurance that fish protection measures are in place by actually observing the conditions and operations at hydroelectric dams.

Role of State and Federal Fish and Wildlife Agencies

We discussed with officials of the states of Oregon and Washington whether or not data is shared between themselves and FERC and what would be the benefit for the state to accompany FERC on hydroelectric dam inspections. A hydroelectric project coordinator speaking for Oregon's Department of Fish and Wildlife's Environmental Management Section said that Oregon generally does not routinely inspect or monitor activities at hydroelectric dams. The coordinator said that the only time Oregon would do so would be in response to a demonstrated state concern about the impact of the dam, such as the Willamette Falls Project which could possibly impact migrating and resident fish. However, the coordinator said that it would be beneficial for the state to accompany FERC on inspections of projects that impact heavily on fish.

The Director, Department of Fish Habitat, Washington Department of Fisheries, told us that the state routinely inspects hydroelectric dam sites to determine their impact on fish. He said that, although the state does not share the fish and wildlife data they collect with FERC, it could do so at no cost to FERC. He also said that, if FERC is interested in monitoring fish-protection measures, the state could provide FERC with documented guidelines as to what to look for at dams that have resources important to the state. Such written guidelines are currently provided to the Corps of Engineers on five dams on the Columbia River. The document provides guidance concerning trapping, handling (transporting), and releasing migrating fish. Regarding FERC's inspection visits, the Director said that the state would welcome an invitation from FERC to accompany them on their hydroelectric dam inspections. Although the state may not accept every invitation, the state would go along on the inspection of dams that affect resources important to the state.

We also discussed with FWS and NMFS officials in the Northwest their role in FERC's hydroelectric regulatory program. They told us that their involvement in this program is almost exclusively in the prelicense phase when they comment on the proposed hydroelectric projects and recommend conditions for inclusion in the licenses. Once FERC issues the license, these two federal agencies generally are not involved in determining whether the fish-protection measures are working properly. These officials told us that it is FERC's responsibility to make such determinations. However, the officials said that they would be interested in

participating in any working agreement involving FERC and state fish and wildlife agencies and in obtaining reports and analyses describing the projects' impacts on fish

We discussed with FERC officials FWS' and NMFS' view that FERC is responsible for determining whether the fish-protection measures are working properly. FERC officials told us that, because federal and state fish and wildlife agencies recommend the measures needed to protect fish, they should be responsible for determining how well their fish-protection measures called for during the licensing process are working. It should be noted, however, that under the FPA, FERC is responsible for making such determinations. Therefore, because FERC is not involved in discussions between federal and state fish and wildlife agencies and operators and does not receive reports on state activities, FERC does not have a basis for ensuring that fish-protection measures are working properly

Conclusions

FERC is responsible under the FPA for determining how well the fish-protection measures in licenses are working. However, FERC does not have the expertise to make such determinations. Instead, FERC relies on state fish and wildlife agencies for these determinations, but has not formalized this process in a written working agreement. Written working agreements between FERC and those fish and wildlife agencies in states with significant fish populations potentially impacted by hydroelectric dams would help to ensure that (1) each agency knows its specific responsibilities and (2) licensees are being adequately monitored for compliance with all license provisions and procedures. Although we did not identify any specific problems, we believe that written agreements would reduce the potential for problems. Such an agreement would also clarify each agency's responsibilities and set forth procedures for resolving any problems or differences

Recommendation to the Chairman, FERC

To fulfill its responsibilities under the FPA for protecting fish, we recommend that the Chairman, FERC, have the Director, Office of Hydropower Licensing, enter into written working agreements with fish and wildlife agencies in those states with significant fish populations potentially impacted by hydroelectric dams. These agreements should specify (1) to what extent FERC will rely on the agencies to ensure that fish-protection measures are working properly and (2) how FERC and the agencies will coordinate their respective activities, including inspections and sharing reports, analyses, and other pertinent data

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