

130 FERC ¶ 61,036
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Marc Spitzer, Philip D. Moeller,
and John R. Norris.

Fall River Rural Electric Cooperative, Inc.

Project No. 11879-029

ORDER ON REHEARING

(Issued January 21, 2010)

1. By order issued October 29, 2009,¹ Commission staff modified and approved the fish screen monitoring plan filed by Fall River Rural Electric Cooperative, Inc. (Fall River), licensee for the 3.3-megawatt (MW) Chester Diversion Hydroelectric Project No. 11879, located on the Henry's Fork of the Snake River in Freemont County, Idaho.² On November 24, 2009, Fall River filed a request for rehearing of the order, challenging the order's requirement for biological effectiveness monitoring to measure the project's fishery impacts with the screens, in addition to operational monitoring to measure the fish screens' adherence to design specifications. As described below, we are denying rehearing and clarifying the requirement.

Background

2. As pertinent here, the project as licensed includes: an existing dam and reservoir; a proposed flow control structure located on the south side of the dam, with a radial gate that will control the flows into the existing Cross Cut irrigation canal; a proposed flow control structure located on the north side of the dam with a radial gate that will control the flows into the existing Last Chance irrigation canal; and a proposed 50-foot-wide

¹ *Symbiotics, LLC*, 129 FERC ¶ 62,084 (2009).

² Fall River's filings were submitted by Symbiotics, LLC (Symbiotics), its authorized agent. The license was issued to Symbiotics in July 2008, 124 FERC ¶ 62,059 (2008), and transferred to Fall River in November 2008, 125 FERC ¶ 62,125 (2008). Staff's October 29, 2009 Order mistakenly refers to Symbiotics, LLC as the licensee.

concrete intake structure on the south side of the spillway to convey water to the turbines located in the proposed powerhouse.

3. Henry's Fork maintains an important blue-ribbon trout fishery,³ and studies indicate that entrainment into the Cross Cut and Last Chance irrigation canals results in the loss of thousands of fish every season.⁴

4. To reduce entrainment and mortality of the fish during project operation, Article 405 of the license requires the licensee to install a 1.5-inch-spaced fish screen across the project's turbines, and Article 406 requires installation across both irrigation canals of fish screens that meet the standards of the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) for fingerlings. The Article 405 and 406 requirements are consistent with the provisions of a pre-licensing settlement agreement between Symbiotics, resource agencies, and non-governmental organizations.⁵

5. To ensure that the fish screens adequately protect the fishery resource, Article 407 of the license requires the licensee to file, for Commission approval, "a plan for post-construction studies to monitor the effectiveness of the project screens to reduce entrainment of fish into the turbine and the irrigation canals."⁶

³ The primary species of management interest in this reach of the Henry's Fork is rainbow trout, which is a self-sustaining population. Brown trout also occur as a self-sustaining population, but in lower numbers.

⁴ See Final Environmental Assessment (EA) issued by staff on April 10, 2008, for licensing the project, at 47.

⁵ See filing of October 26, 2007. Signatories to the agreement were Idaho Fish and Game, Idaho Parks and Recreation, the U.S. Fish and Wildlife Service, the U.S. Forest Service, Trout Unlimited, the Henry's Fork Foundation, and the Greater Yellowstone Coalition. The Agreement is attached for informational purposes as Appendix A of the licensing order, 124 FERC ¶ 62,059 at 64,134-41.

The turbine intake screen bars must be 0.5 inch thick by 6 inches wide, with screen openings of 1.5 inches and a maximum approach velocity of the water to the turbine screen not to exceed 4 feet per second. The canal screens must have openings of 0.25 inch and include a downstream bypass. See section 6 of the settlement agreement.

⁶ 124 FERC ¶ 62,059 at 64,126-27. The licensee must prepare the plan in consultation with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service.

6. The licensee did not seek rehearing of these requirements.
7. On April 7, 2009, Commission staff issued separate orders approving the licensee's plans to install fish screens on the turbines (Article 405) and the irrigation canals (Article 406).⁷
8. On August 26, 2009, the licensee filed its plan for monitoring the effectiveness of the fish screens under Article 407. The proposed plan called for measuring approach and sweeping velocities⁸ across a range of operating conditions to verify that the approach velocities at the canal and turbine screens meet the required standards. According to the licensee, constructing the fish screens to the Article 405 and 406 specifications ensures their effectiveness. Moreover, the licensee explained that the settlement agreement did not include a fish sampling requirement to evaluate effectiveness.⁹
9. However, as noted by Idaho Department of Fish and Game (Idaho DFG) in its comments on the plan, the plan failed to include a proposal to monitor the effectiveness of the screens "to reduce entrainment of fish into the turbine and the irrigation canals," as required by Article 407. Idaho DFG recommended that, at a minimum, the plan should be modified to provide for a quantitative analysis of the number and size of fish (1) impinged and killed on the screens, (2) passing through the screens and surviving, and (3) passing through the screens and being killed or lost to irrigation.
10. The October 29, 2009 order on the Article 407 plan found¹⁰ that, while the licensee's plan would ensure the screens met the required physical parameters, it did not meet the requirements of Article 407 in that it would not measure the screens' performance. The order stated that, without a quantitative measure of fish impingement, entrainment, or survival, the Commission would be unable to determine whether the

⁷ See Order Modifying and Approving Turbine Intake Screens Plan Under Article 405, 127 FERC ¶ 62,017 (2009); and Order Approving Irrigation Canal Screens Plan Under Article 406, 127 FERC ¶ 62,019 (2009).

⁸ Approach velocity is the speed of the water going straight into the screen. Juvenile fish must be able to swim at a speed equal or greater than the approach velocity for an extended length of time to avoid impingement on the screen. Sweeping velocity is the speed of the water going across the screen. High sweeping velocities help prevent impingement by carrying or guiding fish away from the screen. The sweeping velocity must equal or exceed the maximum allowable approach velocity.

⁹ Licensee's August 26, 2009 filing at 2-3.

¹⁰ 129 FERC ¶ 62,084 at P 14.

screens meet the objectives for which they are designed, i.e., reducing fish entrainment and mortality to ensure a healthy fishery. Thus, the order concluded that following successful completion of the physical evaluation of the screens, as proposed by the licensee, the licensee should perform a minimum of one year of biological evaluation (entrainment studies) of the fish screens. The order required the licensee to file a plan for the biological evaluation of the turbine and canal screens and canal bypasses with the Commission within one year after filing the results of the physical evaluation of the screens and bypasses. The plan was to include provisions for determining the number and size of fish injured or killed due to impingement or entrainment. The order reserved the Commission's right to require additional fish protection measures and additional biological evaluation of the fish screens based on its review of the monitoring results.¹¹

Discussion

A. The Record Permits Valid Biological Monitoring Findings

11. On rehearing, the licensee argues that there is a lack of baseline numeric criteria for measuring the level of acceptable fish mortality at the project and therefore no way to evaluate success (i.e., whether injury or mortality from impingement or entrainment is reduced).¹² We disagree. The EA cited various fish population studies, including those conducted by Symbiotics and governmental and non-governmental agencies, that provide a basis for determining baseline population and rough but acceptable estimates of existing mortality levels.¹³

12. The licensee further contends that adherence to the NMFS screen designs provides adequate assurance that the screens will protect fingerlings and larger-size fish from being entrained or killed.¹⁴ Again, we disagree. Meeting NMFS criteria for the screening is not dispositive of site-specific fishery impacts. Rather, it is only the first step in a two-part process. Biological monitoring, the second step, is required to ensure the actual "effectiveness of the project screens to reduce entrainment of fish into the project's turbine and the irrigation canals," as Article 407 requires. As staff's October 29 Order found,¹⁵ without a quantitative measure of fish impingement, entrainment, or

¹¹ *Id.*, at 64,235 (Ordering Paragraph (C)).

¹² Request for rehearing at 7-11.

¹³ *See* EA at 35-39 and tables 4-7.

¹⁴ Request for rehearing at 8.

¹⁵ 129 FERC ¶ 62,084 at P 14.

survival, we are unable to determine that the screens meet the objectives for which they are designed.

13. While the screens and other components of the screening operation are measures designed to mitigate the project's potential adverse operational impacts on the project-area fishery, actual project operation can and will nevertheless result in some fish mortality. The biological monitoring required by the October 29 staff order will enable the Commission to determine how project-related fish mortality relates to pre-project mortality and, more importantly, whether such mortality threatens the viability of the fishery. Adverse biological effects could include significant reductions in the most prized species, and for critical life-stages of those species, that could threaten fishery sustainability. The biological monitoring may show the screens' operations result in an acceptable level of fish mortality at the project's site and the biological monitoring required by the staff's October 29 Order may not be required more than once.¹⁶ Nevertheless, and especially in light of the blue ribbon fishery, we will be unable to verify that the fish screens are effective without the biological monitoring required by the staff's order.

B. Expected Costs Do Not Preclude Biological Monitoring

14. The licensee argues that the biological monitoring required by staff's October 29 Order imposes "prohibitive" costs of "hundreds of thousands of dollars over a period of many years," far eclipsing the operational monitoring cost, with no useful results.¹⁷

15. We do not accept the licensee's vague and unsupported contentions as to the cost of the biological monitoring required by staff's order. Our staff estimates that the one-time cost of the biological monitoring study would be approximately \$40,000. This cost, annualized over the license term, would be approximately \$1,834 per year, hardly prohibitive or unreasonable.

16. Moreover, we reject any suggestion that the monitoring requirements imposed by the October 29 Order were not contemplated by Article 407. As noted, the language of that article requires the licensee "to monitor the effectiveness of the project screens to reduce entrainment of fish into the turbine and the irrigation canals." Both biological and

¹⁶ Ordering Paragraph C of staff's October 29 order does not specify a monitoring period, but P 14 of the order states that "the licensee should perform a minimum of one year of biological evaluation of the fish screens."

¹⁷ Request for rehearing at 12-13. The licensee contends that the monitoring it proposed (and that the order requires) will cost approximately \$5,380 a year over the license term -- the amount estimated in the EA for monitoring under Article 407.

operational effectiveness studies are needed to show the overall effectiveness of fish screens in mitigating fish mortality.¹⁸ Moreover, such studies are neither unusual¹⁹ nor, as we expect here, particularly onerous financially or otherwise.

C. The Provisions of the Settlement Agreement Do Not Preclude Biological Monitoring

17. The licensee contends that the biological monitoring required by the staff's October 29 Order was not a condition of the parties' settlement agreement and therefore should not be required by the Commission.²⁰ Indeed, it states that it would never have signed the settlement agreement if it were expected to demonstrate through a costly biological monitoring study that project-related fish mortality is not excessive.²¹

18. However, the Commission is not bound by the provisions of the settlement agreement, but rather must make an independent decision as to what requirements must be included in the license, and how those requirements are to be implemented. In issuing the license for this project, Commission staff neither adopted nor approved the settlement agreement. In some instances, it included license conditions that were consistent with the settlement agreement (Article 406, for example). In other cases, it included requirements that were not in the settlement, for example, Article 407.²² The settlement does not represent the totality of the licensee's obligations.

19. We are amending the October 29 Order to require the licensee to prepare its plan in consultation with the Idaho DFG and the U.S. Fish and Wildlife Service and to file the plan for Commission approval. In addition, we are clarifying the requirements of the required plan.

¹⁸ If the licensee had concerns with the nature, or estimated cost, of the monitoring requirements of Article 407, it should have raised them on rehearing of the license order.

¹⁹ *See, e.g., Pacific Gas and Electric Company*, 109 FERC ¶ 61,084, at P 8 (2004) (imposing a two-year biological monitoring requirement and finding its imposition "not ... particularly onerous.").

²⁰ Request for rehearing at 14.

²¹ On the other hand, as noted, Idaho DFG states in its comments on licensee's Article 407 monitoring plan that biological monitoring was an integral part of settlement negotiations. *See* licensee's August 26, 2009 filing, Appendix A.

²² Unlike Article 407, the settlement agreement required neither biological nor operational monitoring of fish screen effectiveness.

The Commission orders:

(A) The request for rehearing filed November 24, 2009, by Fall River Rural Electric Cooperative, Inc., is denied.

(B) Ordering Paragraph C of the order issued October 29, 2009, is modified to read as follows:

(C) Within one year after filing the results of the physical evaluation of the screens and bypasses, as required in Ordering Paragraph B, the licensee shall file with the Commission for approval, a plan for post-construction studies to evaluate the biological effect of the project's turbine and canal screens. The objectives of the biological evaluation are to determine the number and size of fish injured or killed due to impingement and entrainment. The licensee shall prepare the plan after consultation with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring indicate that changes in project structures or operations are necessary to protect the fishery resources, the Commission may direct the licensee to modify project structures or operations.

Based on its review of the monitoring results, the Commission reserves its right to require additional fish protection measures

to maintain a viable fishery or additional biological evaluation of the fish screens at the Chester Diversion Hydroelectric Project.

By the Commission. Commissioner Norris voting present.

(S E A L)

Kimberly D. Bose,
Secretary.