

156 FERC ¶ 62,058
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Alabama Power Company

Project No. 2146-199

ORDER AMENDING LICENSE TO AUTHORIZE UNIT 1 TURBINE
REPLACEMENT AT THE JORDAN DEVELOPMENT

(Issued July 21, 2016)

1. On June 9, 2016, Alabama Power Company (Alabama Power), licensee for the Coosa River Project No. 2146, filed an application for an amendment of the project's license to replace the Unit 1 turbine at the Jordan Development of the Project. The project is located on the Coosa River in Cherokee, Etowah, Calhoun, St. Clair, Talladega, Shelby, Coosa, Chilton, and Elmore counties, Alabama, and Floyd County, Georgia, and occupies federal land administered by the U.S. Bureau of Land Management.

Background

2. On June 20, 2013, the Commission issued an Order Issuing a New License for the Coosa River Project.¹ The Coosa River Project includes seven developments. The Jordan Development consists of: (1) a dam with (a) a 177-foot-long concrete east non-overflow section, (b) a 246-foot-long powerhouse intake section that includes trashracks with a 4-1/8-inch clear spacing, (c) a 1,330-foot-long concrete spillway with eighteen 34-foot-wide by 8-foot-high radial lift gates and seventeen 30-foot-wide by 18-foot-high vertical lift gates, and (d) a 75-foot-long concrete west non-overflow section; (2) an 18-mile-long lake with a surface area of 5,880 acres at normal pool elevation 252 feet mean sea level (msl); (3) a 300-foot-long by 62-foot-wide concrete powerhouse containing four generating units, three units with (a) a vertical propeller turbine with a 36,000 horsepower rating (27,000 kW) and a maximum discharge of 4,960 cfs, and (b) a generator rated at 25,000 kW; and one unit with (a) a vertical propeller turbine with a 40,000 horsepower rating (30,000 kW) and maximum discharge of 5,200 cfs, and (b) a generator rated at 25,000 kW. The total rated capacity is 100 MW; (4) a substation; and (5) appurtenant equipment.

Proposed Amendment

3. Alabama Power requests approval to modify Unit 1 at the Jordan Development to address significant maintenance needs and to improve power and efficiency. The

¹ *Alabama Power Company*, 143 FERC ¶ 61,249 (2013).

proposed scope of work for Unit 1 includes complete turbine replacement, wicket gate replacement, governor and servomotor system replacement, turbine and thrust bearing refurbishment, and related component replacement. Alabama Power also proposes to extend vacuum breaker piping to enhance Unit 1's aerating capability through a draft tube aeration system that will operate in a similar manner as Units 2, 3, and 4 at the Jordan Development. Alabama Power does not expect the turbine replacement to result in an increase to the total rated capacity or the maximum discharge of the unit at rated conditions. Alabama Power further states that project operations will not change; refurbishment will not include any structural changes to the project facilities, and will not require any changes to the project boundary.

Pre-Filing Consultation

4. Alabama Power provided a draft application for review and comment to the Alabama Department of Conservation and Natural Resources (Alabama DCNR), the Alabama Department of Environmental Management (Alabama DEM), the Alabama State Historical Commission (Alabama SHPO), and the U.S. Fish and Wildlife Service (FWS) on April 7, 2016, and provided a supplement to the draft on May 16, 2016. The licensee received responses and concurrence from the Alabama DEM, Alabama SHPO, the FWS, and the Alabama DCNR, on May 18, May 27, June 6, and June 7, 2016, respectively.
5. The Alabama DCNR stated it had no objections to the upgrades provided that there is no increase to fish entrainment or discharge rates as a result of the upgrade, and requests further consultation regarding the timing and duration of the upgrade, if approved. Alabama Power responded to the Alabama DCNR by stating the maximum discharge of the unit at rated conditions is not expected to increase as a result of the proposed upgrade, and that it does not expect any increases in fish entrainment. Alabama Power further stated that it will notify the Alabama DCNR and other resource agencies when construction begins, and will provide an anticipated date of construction completion. Alabama Power will also notify the resource agencies if the anticipated completion date changes and when the unit has been returned to service.
6. The FWS stated that it has no objections to the upgrades as long as minimum flows are maintained for the benefit of the listed species downstream. Alabama Power responded to the FWS comment by stating they are not proposing to alter operations as a result of the upgrade.
7. The Alabama SHPO commented that the proposed upgrade will not have an adverse effect on the cultural resources listed on or eligible for the National Register of Historic Places (National Register).
8. The Alabama DEM concurred with the revised amendment application and had no additional comments.

Public Notice

9. The Commission issued a public notice of the license amendment application on June 16, 2016, with a deadline of July 1, 2016, for filing comments, motions to intervene, and protests. No responses to the notice were filed with the Commission.

Discussion

A. Project Operation

10. Alabama Power operates the Jordan Development as a run-of-river facility, and is not proposing any changes to project operations. The minimum flows required under Article 405 of the license will remain in effect. Alabama Power states that it will replace the turbine for Unit 1 using the same type of turbine that is currently in the unit, a Francis-type turbine, and will use an upgrade process similar to the one used for the Unit 4 replacement.

11. Alabama Power expects the amount of discharge from the project to remain unchanged. Alabama Power explains the cavitation flow limits set by the vendor will limit the maximum discharge for the upgraded unit at rated conditions to approximately 4,625 cubic feet per second (cfs) to prevent damage to the runner.

B. Environmental Review

12. Alabama Power states that they do not expect any increase in fish entrainment associated with the turbine replacement. Alabama Power states that, since the maximum discharge of the unit at rated conditions is not expected to increase, the current approach velocity at the trashracks will remain at 1.84 feet/second, and seasonal entrainment rates will not increase.

13. Alabama Power does not anticipate that the scope of the proposed work will have an adverse impact on any historic properties listed or eligible for the National Register. The approved Historic Properties Management Plan for the Coosa River Project specifically addresses and allows for the repair or replacement of turbines, generators, governors, and wicket gates, in order to maintain and operate the development.² Furthermore, Alabama Power states that the turbines themselves are not considered eligible for the National Register.

² The Historic Properties Management Plan was filed with the Commission on October 27, 2013. Article 418 requires the licensee to implement the PA and the Historic Properties Management Plan.

14. Alabama Power does not anticipate any effects on the threatened and endangered species or critical habitat in the Coosa River below the Jordan Dam, specifically the Tulotoma Snail. Alabama Power states that it will not change project operations, and that the minimum flow required by Article 405 (to protect, in part, the federally listed Tulotoma Snail) of the license will not be affected. Furthermore, Alabama Power states that releases will continue to meet state water quality standards.

15. As part of its June 9, 2016, amendment application, the licensee consulted with the Alabama DCNR, the Alabama DEM, the Alabama SHPO, and the FWS and obtained their concurrence on the proposed upgrade.

C. Installed Capacity

16. As proposed, the turbine replacement would not increase the Unit 1 turbine rating, and the development's installed capacity is generator limited. Therefore, the Jordan Development's installed capacity will not change.

D. Exhibits

17. The licensee included the existing Exhibit A for the Jordan Development, which does not reflect the changes due to the Unit 1 turbine replacement. In ordering paragraph (C), we are requiring the licensee to submit an as-built Exhibit A, along with revised Exhibits F and G, as necessary, within 90 days of the date of completion of construction to reflect the changes to Unit 1. Also, in ordering paragraph (D), we are requiring the license to file the date of commencement of construction, photo documentation of the Unit 1 turbine and generator nameplates, and a description of the turbine capacities before and after the replacement.

Conclusion

18. Based on the information provided by the licensee, agency comments, and staff's independent analysis, we find the licensee's proposed modification of Unit 1 of the Jordan Development would not constitute a major federal action significantly affecting the quality of the human environment. Therefore, the licensee's application for amendment of license should be approved.

The Director orders:

(A) Alabama Power Company's application for amendment of license, filed on June 9, 2016, to replace the Unit 1 turbine at the Jordan Development of the Coosa River Project No. 2146, is approved as provided in this order.

(B) The licensee must start construction of the proposed work authorized in this order within two years, and complete construction within four years from the issuance date of this order.

(C) Within 90 days of completion of construction of the facilities authorized by this order, the licensee must file for Commission approval, revised Exhibits A, F, and G, as applicable, to describe and show those project facilities as built.

(D) Within 90 days of the date of completion of construction authorized in this order, the licensee must file with the Commission, the date of commencement of construction, photo documentation of the Unit 1 generator and turbine nameplates, and a description of the turbine's installed and hydraulic capacities before and after the upgrade.

(E) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2015). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Kelly Houff
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Document Content(s)

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