174 FERC ¶ 62,064
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Georgia Power Company Project No. 2354-148

ORDER AMENDING LICENSE, APPROVING REVISED EXHIBIT A, REVISING PROJECT DESCRIPTION, AND REVISING ANNUAL CHARGES

(Issued February 2, 2021)

1. On June 15, 2020, and supplemented on July 7, 2020 and August 10, 2020, Georgia Power Company, licensee for the North Georgia Project No. 2354,[1] filed a non-capacity amendment application to replace and upgrade two generating units at the Mathis-Terrora (Terrora) powerhouse. The project is located in the Savannah River basin on the Tallulah, Chattooga, and Tugalo rivers, in Rabun, Habersham, and Stephens counties, Georgia and Oconee County, South Carolina. The project does not occupy federal lands.

Background

2. The Commission issued a new license for the project on October 3, 1996. The project consists of six hydroelectric developments: Burton, Nacoochee, Mathis-Terrora, Tallulah Falls, Tugalo, and Yonah. As amended,[2] the Mathis-Terrora Development consists of: (a) the 617-foot-long, 115-foot high concrete slab and buttress Mathis dam, with a 275-foot-long left nonoverflow section, a 290-foot-long gated spillway section, and a 50-foot-long right nonoverflow section; (b) a 370-foot-long, 65-foot-high saddle dike on the reservoir rim; (c) a 780-acre reservoir (Lake Rabun) with a gross storage capacity of 31,100 acre-feet and a useable storage capacity of 21,900 acre-feet at a full pond elevation of 1,689.6 feet mean sea level (m.s.l.); (d) a reinforced concrete intake structure on the right abutment 500 feet upstream of Mathis dam; (e) a horseshoe-shaped power tunnel 5,334 feet long, 16 feet high, and 11 to 13 feet wide, cut through rock and lined with concrete only at the entrance and exit, leading to a reinforced concrete surge tank; (f) two 9-foot-diameter, 850-foot-long steel penstocks connecting the surge tank with the Terrora powerhouse; (g) the Terrora powerhouse containing two generating units with a total rated capacity of 16 megawatts (MW) and discharging directly into the

[1] *Georgia Power Company,* 77 FERC ¶ 62,002 (1996).

[2] *Georgia Power Company*, 159 FERC ¶ 62,168 (2017).

Tallulah Falls impoundment; and (h) four transformers, in the substation at the east end of the powerhouse, connecting directly to the distribution system.

3. Article 201 of the license states that the licensee must pay the United States an annual charge, effective as of the first day of the month in which this license is issued, for the purpose of reimbursing the United states for the costs of administrating Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 168,400 kilowatts.

Licensee's Proposal

4. The licensee states that the Mathis-Terrora Development is experiencing chronic maintenance issues and increasing failures that have impacted its operating performance and reliability. The licensee requests Commission approval of a non-capacity amendment to replace and upgrade two generating units in the Terrora powerhouse. The licensee is planning to replace the runners of units 1 and 2, rewind the generators of units 1 and 2, refurbish field pole pieces on the generator rotor, replace transformers and associated resistors, balance plant electrical and mechanical systems, install new intake trash racks, remodel the control room and upgrade instrumentation.

5. The proposed upgrades would not change any project features, operations, or impact water control capabilities of the Terrora powerhouse. The licensee will operate the Terrora powerhouse with no change to existing lake levels at Lake Rabun and Tallulah Falls Lake. The upgrades would increase the installed capacity from 16 MW to 20.8 MW, and the hydraulic capacity from 800 to 819.5 cubic feet per second (cfs) at the Mathis-Terrora Development. The installed capacity would increase by 4.8 MW (2.4 MW per unit) and the hydraulic capacity by approximately 2.3 percent. The licensee plans to commence the upgrades for Unit 2 in 2020 and Unit 1 in 2021.

6. The licensee also included a revised Exhibit A-Project Description to reflect the proposed changes at the Mathis-Terrora Development. The licensee states that the proposed upgrades will not change Exhibit B, Exhibit G, or the Recreation Plan; therefore, no revisions are need. The licensee does not anticipate any changes to the Exhibit F drawings, but if they are need, the licensee will provide upgrades after the as-built drawings are complete.

Agency Consultation

7. In early 2020, the licensee submitted a summary of the upgrades to the U.S. Forest Service (Forest Service), U.S Fish and Wildlife Service (FWS), Georgia Department of Natural Resources (Georgia DNR) – Environmental Protection Division, Georgia DNR – Wildlife Resources Division, and Georgia DNR – Historic Preservation Division, and provided an opportunity to meet and discuss the proposed upgrades. Based on the

discussions, there were no objections to the upgrades. The licensee included documentation of its initial consultation as Attachment B to the amendment.

8. On June 4, 2020, the licensee sent the draft application to the agencies and gave until June 15, 2020 for comments. Georgia DNR-Environmental Protection Division replied on June 5, 2020 that it had no additional comments. On June 5, 2020, Georgia DNR – Wildlife Resources Division agreed with the licensee's conclusion that the upgrades are not expected to have any impact on the current flow, lake levels, aquatic life, or recreation. On June 12, 2020, Georgia DNR – Historic Preservation Division stated that they will work with the licensee to develop the Memorandum of Agreement (MOA) and did not have identify any issues with the draft application. The licensee included documentation of its consultation as Attachment D to the amendment.

9. The licensee states that it has been consulting with the applicable agencies over 60 days regarding the proposed upgrades and requested a waiver of the formal 60-day review of the application.

Public Notice

10. The Commission issued a public notice on July 13, 2020, soliciting comments, motions to intervene, protests for the non-capacity license amendment application. The notice established a 30-day deadline for filing responses to the notice, or August 13, 2020. No comments or responses were filed.

National Historic Preservation Act

11. Under section 106 of the National Historic Preservation Act (NHPA)[3] and its implementing regulations,[4] federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register, defined as historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO), to determine whether and how a proposed action may affect historic properties and to seek ways to avoid or minimize any adverse effects.

12. The licensee proposes to amend the project's license to replace and upgrade two generating units in the Terrora powerhouse, which would include replacing the control room panels and intake trash racks (Undertaking). Pursuant to section 106 of the NHPA, Commission staff has determined this Undertaking would adversely affect the Terrora

[3] 54 U.S.C. § 306108, Pub.L. No 113-287, 128 Stat. 3188 (2014).

[4] 36 C.F.R Part 800 (2019).

powerhouse, which is a contributing element to the North Georgia Project, which is eligible for the National Register of Historic Places.

13. In order to mitigate the adverse effect to historic properties, a Memorandum of Agreement (MOA) was executed among the Commission and the Georgia SHPO. On July 20, 2020, the Commission provided a draft MOA to the Georgia SHPO for review and comment. On September 11, 2020, the licensee filed a revised draft MOA, incorporating comments from the Georgia SHPO, for Commission review. Based on the comments it received, the Commission provided received draft MOA to the Georgia SHPO and licensee on September 30, 2020. On November 6, 2020, the licensee filed comments from the Georgia SHPO on the revised draft MOA. On November 17, 2020, the Commission provided the draft MOA to the Advisory Council for review and comment within 15 days of letter issuance. In a December 1, 2020 letter, the Advisory Council said its participation to resolve adverse effects is not needed. Therefore, on January 6, 2021, the Commission provided the MOA to the Georgia SHPO and the licensee. On January 6 and January 13, 2021, respectively, the Commission and the Georgia SHPO signed the MOA. The licensee also signed the MOA as a concurring party. Execution of the MOA demonstrates the Commission's compliance with section 106 of the NHPA. Ordering paragraph (G) requires the licensee to implement the MOA.

Review

A. Environmental Review

Water Quantity and Quality

14. The licensee's proposal will change the maximum hydraulic capacity from 800 cfs to 819.5 cfs. This change in capacity will not result changes to hydrology because the project discharges directly into a reservoir so stream morphology changes will not result from the change. Consultation with the resource agencies support this conclusion.

15. Dissolved oxygen and temperature are not expected to be significantly affected by this proposal. Consultation with Georgia DNR-Environmental Protection Division provided information showing that changes in temperature and dissolved oxygen would be negligible. Georgia DNR-Environmental Protection Division stated that the project was meeting water quality criteria before the proposal and will continue to meet the criteria after completion of the upgrades. They concluded that the was no need to revise the Section 401 Clean Water Certification conditions based on the proposal.

Fisheries

16. The proposal will increase approach velocities 0.08 feet per second (ft/sec) (from 1.54 to 1.62 ft/sec) at full gate. This increase is insignificant and is not expected to increase entrainment of fish at the project. The trash racks are 3/8" bars spaced 3" apart.

Species present at the project that could be excluded by the trash racks have swim speeds that allow them to escape impingement. The minimal change in approach velocity should not have an effect on this ability.

Cultural Resources

17. The licensee's proposal to amend the project's license to replace and upgrade two generating units in the Terrora powerhouse would also include replacing the control room panels and intake trash racks. These activities would adversely affect the Terrora powerhouse, which is a contributing element to the North Georgia Project, which is eligible for the National Register. In order to mitigate the adverse effect to historic properties, the Commission and licensee, in consultation with the Georgia SHPO, developed a plan to mitigate the adverse effect to historic properties and memorized that plan in the final MOA.

18. The MOA identifies appropriate mitigation measures for the adverse impacts. The licensee will implement the following mitigation measures, which are described in detail in the MOA, and the Commission will ensure the measures in the agreement document are carried out. The licensee will complete the following actions: (1) recording of archival photographs and permanent record of the interior and exterior setting of the powerhouse, focusing on the control room and its generator area; (2) compliance from the photographer with the minimum level standards necessary for documentation retention with the Georgia SHPO pursuant to the *Guidelines for Establishing a Permanent Archival Record*; and (3) addressing any unanticipated discoveries in accordance with the project's Historic Properties Management Plan.[5]

B. Threatened and Endangered Species

19. Section 7(a)(2) of the Endangered Species Act of 1973[6] requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat. The federally threatened northern long-eared bat and the bog turtle, and the federally endangered gray bat may be present in the Mattis-Terrora development area along with five federally-listed flowering plants.[7]

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[5] *Georgia Power Company*, 77 FERC ¶ 62,002 (1996).

[6] 16 U.S.C. § 1536(a) (2018).

[7] The five federally-listed flowering plants include Georgia aster, smooth coneflower, persistent trillium, persistent trillium, and small whorled pogonia.

20. The licensee's proposed activities will occur inside the powerhouse and on the trash rack, and do not require any ground disturbance or cutting of trees; therefore, there would have no effect on the bats. The bog turtle generally occupies open-canopy, herbaceous sedge meadows and fens bordered by wooded areas. The licensee's proposal will have no effect on the bog turtle because there will be no disturbance to their habitat caused by tree cutting or ground disturbance. There will also be no effect on the five species of endangered flowering because there will be no disturbance to their habitats as a result of the licensee's proposed project. Because the proposed activities would not disturb any individuals of the previously mentioned species or their habitat, we determine the proposed action would have no effect on federally listed threatened or endangered species.

C. Administrative Provisions

Revised Exhibits

21. We reviewed the revised Exhibit A filed on August 10, 2020 and found it accurately reflects the project facilities. The Exhibit A conforms to the Commission's rules and regulations and should be approved, as shown in ordering paragraph (B). Ordering paragraph (C) of this order revises the project description in ordering paragraph (B)(2) of the license consistent with the revised Exhibit A.

22. If any changes occur during design, review, or construction of the project facilities, as authorized by this order, the licensee must file a revised as-built Exhibit A, F, and G for Commission Approval. Ordering Paragraph (D) of this order requires the filing of these exhibits.

23. Ordering paragraph (E) of this order requires the licensee to file nameplate photo documentation of the units authorized in this order upon completion of construction of those facilities.

Annual Charges

24. The licensee's proposal would increase the total installed capacity at the Mathis-Terrora Development by 4.8 MW from 16 to 20.80 MW, limited by the capacity of the turbines. Consequently, the capacity increase in the two units at the Mathis-Terrora Development will revise the total authorized capacity of the North Georgia Project from 168.4 MW to 173.2 MW. Therefore, we will revise Article 201 of the license to reflect the revised installed capacity in ordering paragraph (F) of this order.

Table 1. License Authorized and Proposed Capacities at Mathis-Terrora Development

Unit No.	License Authorized		Proposed			
	Installed Capacity (MW)	Hydraulic Capacity (cfs)	Turbine Capacity (MW)	Generator Capacity (MW)	Hydraulic Capacity (cfs)	Installed Capacity (MW)
Unit 1	8	800	10.4	11.5	819.5	10.4
Unit 2	8	800	10.4	11.5	819.5	10.4
Total	16					20.8

Conclusion

25. Based on the information provided by the licensee and staff's independent analysis, we find that authorizing the licensee's proposed upgrades in the Terrora powerhouse would not constitute a major federal action significantly affecting the quality of the human environment. Therefore, the amendment should be approved.

The Director orders:

(A) Georgia Power Company's non-capacity license amendment application for the North Georgia Project No. 2354, filed on June 15, 2020, and supplemented July 7, 2020 and August 10, 2020, is approved.

(B) Georgia Power Company's revised Exhibit A, filed on August 10, 2020, is approved and made part of the license, superseding and replacing the previous Exhibit A.

(C) This order revises ordering paragraph (B)(2) of the license to read as follows:

(2) Project works consisting of:

The Burton Development consisting of: (a) the 987.5-foot-long, 128-foot-high concrete gravity Burton dam, with a 296.5-foot-long left nonoverflow section, a 197-foot-long gated spillway, a 69.5-foot-long sluiceway section, a 64-foot-long intake section, and a 360.5-foot-long right nonoverflow section; (b) a 2,775-acre reservoir (Lake Burton) with a gross storage capacity of 108,000 acre-feet and a useable storage capacity of 90,000 acre-feet at a full pond elevation of 1,866.6 feet mean sea level (m.s.l.); (c) two 7-foot-diameter and 120-foot-long steel penstocks; (d) a powerhouse at the toe of the dam containing two generating units with a total installed capacity of 8.1 megawatts (MW); (e) a 50-foot-wide tailrace that merges with the Tallulah River 150 feet downstream of the powerhouse; and (f) a step up transformer, located in a substation adjacent to the powerhouse, that connects directly to the distribution system.

The Nacoochee Development consisting of: (a) the 500-foot-long, 73-foot-high concrete gravity Nacoochee dam, with a 190-foot-long left nonoverflow section, a 54-foot-long intake section, a 38-foot-long sluiceway section, a 140-foot-long free-crested spillway, and a 78-foot-long right nonoverflow section; (b) a 260-acre reservoir (Lake Seed) with a gross storage capacity of 8,250 acre-feet and a useable storage capacity of 5,350 acre-feet at a full pond elevation of 1,752.5 feet m.s.l.; (c) two 9-foot-diameter, 80-foot-long steel penstocks built into the intake section of the dam; (d) a powerhouse at the toe of the dam containing two generating units with a total installed capacity of 4.8 MW; (e) a 50-foot-wide tailrace that merges with the river channel 200 feet downstream of the powerhouse; and (f) a step up transformer, located in a substation just below the powerhouse, that connects directly to the distribution system.

The Mathis-Terrora Development consisting of: (a) the 617-foot-long, 115-foot-high concrete slab and buttress Mathis dam, with a 275-foot-long left nonoverflow section, a 290-foot-long gated spillway section, and a 50-foot-long right nonoverflow section; (b) a 370-foot-long, 65-foot-high saddle dike on the reservoir rim; (c) a 780-acre reservoir (Lake Rabun) with a gross storage capacity of 31,100 acre-feet and a useable storage capacity of 21,900 acre-feet at a full pond elevation of 1,689.6 feet m.s.l.; (d) a reinforced concrete intake structure on the right abutment 500 feet upstream of Mathis dam; (e) a horseshoe-shaped power tunnel 5,334 feet long, 16 feet high, and 11 to 13 feet wide, cut through rock and lined with concrete only at the entrance and exit, leading to a reinforced concrete surge tank; (f) two 9-foot-diameter, 850-foot-long steel penstocks connecting the surge tank with the Terrora powerhouse; (g) the Terrora powerhouse containing two generating units with a total rated capacity of 20.8 MW and discharging directly into the Tallulah Falls impoundment; and (h) four transformers, in the substation at the east end of the powerhouse, connecting directly to the distribution system.

The Tallulah Falls Development consisting of: (a) a 426-foot-long, 130-foot-high concrete gravity dam with two abutments and a gated spillway section with ten bays, each eight feet high and 28 feet wide; (b) a 63-acre reservoir (Tallulah Falls Lake) with a gross storage capacity of 2,450 acre-feet, and a useable storage capacity of 1,490 acre-feet, at a full pond elevation of 1,500 feet m.s.l.; (c) a concrete intake structure located about 75 feet upstream of the dam; (d) a 6,665-foot-long, 11-foot-wide, 14.5-foot-high concrete lined, horseshoe-shaped power tunnel, discharging into a reinforced concrete surge tank 93 feet high, 71 feet long, and 30 feet wide; (e) six steel penstocks, each five feet in diameter and 1,250 feet long, connecting the surge tank to the powerhouse; (f) the Tallulah Falls powerhouse containing six generating units rated at 12 MW each, for a total capacity of 72 MW, and discharging into the Tallulah River; and (g) a 1,200-foot-long incline railway providing access to the powerhouse.

The Tugalo Development consisting of: (a) an 840-foot-long, 160-foot-high concrete gravity dam, with a 73-foot-long left nonoverflow section, a 357-foot-long gated spillway section, a 20-foot-long center nonoverflow section, a 165-foot-long intake

section, and a 225-foot-long right nonoverflow section; (b) a 597-acre reservoir (Tugalo Lake) with a gross storage capacity of 43,000 acre-feet and a useable storage capacity of 14,000 acre-feet, at a full pond elevation of 891.5 feet m.s.l., and which extends up the Chattooga River about three miles from the Tallulah/Chattooga confluence; (c) four 13-foot-diameter, 308-foot-long steel penstocks from the intake section to the powerhouse; (d) a powerhouse containing four generating units rated at 11.25 MW each, for a total capacity of 45 MW; and (f) a 200-foot-long, 150-foot-wide tailrace, separated from the main channel on its left by a concrete wall about 70 feet long and on its right by a concrete wall about 200 feet long.

The Yonah Development consisting of: (a) a 947-foot-long, 95-foot-high concrete gravity dam, with a 112-foot-long left nonoverflow section, a 450-foot-long spillway section with 2-foot-high flashboards, an approximately 49-foot-long sluiceway section, a 131.5-foot-long intake section, and an approximately 204-foot-long right nonoverflow section; (b) a 293-acre reservoir (Lake Yonah) with a gross storage capacity of 10,200 acre-feet, and a useable storage capacity of 6,000 acre-feet at a full pond elevation of 744.25 feet m.s.l.; (c) three 15-foot-diameter penstocks built into the dam; (d) a powerhouse with three 7.5-MW generating units for a total capacity of 22.5 MW; and (e) a 120-foot-wide tailrace which is separated from the main river channel on the left by a 240-foot-long concrete wall and on the right by a 200-foot-long concrete wall.

The project works are more specifically described and shown in project Exhibits A and F.

(D) Within 90 days of completion of construction of the improvements authorized by this amendment, the licensee must file for Commission approval, revised Exhibits A, F and G, as applicable, to describe and show those project facilities as built. If the licensee determines that no revisions are necessary, the licensee must file a letter stating the approved exhibits reflect the as-built project facilities.

(E) Within 90 days of completion of construction of the facilities authorized by this order, the license must file photo documentation of the new generator and turbine nameplates.

(F) This order revises Article 201 of the license to read as follows:

Article 201. The licensee must pay the United States an annual charge, effective the date of this order, for the purpose of reimbursing the United States for the costs of administering Part I of the Federal Power Act, a reasonable amount as determined in

accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 173,200 kilowatts.

(G) *Memorandum of Agreement*. The licensee must implement the "Memorandum of Agreement Among the Federal Energy Regulatory Commission and the Georgia State Historic Preservation Officer Regarding Alterations to Mattis-Terrora Powerhouse of the North Georgia Hydroelectric Project in Rabun County, Georgia" executed on January 13, 2021. In the event that the Memorandum of Agreement (MOA) is terminated, the licensee must continue to implement the provisions of the MOA. The Commission may request changes to the provisions of the MOA at any time while the MOA is in effect. The licensee must provide the Commission with notification that all provisions of the MOA have been fulfilled and accepted by the Georgia SHPO within 60 days of receiving such notification from the Georgia SHPO.

(H) 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. § 825*l* (2018), and the Commission's regulations at 18 C.F.R. § 385.713 (2020). 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
Chief, Engineering Resources Branch
Division of Hydropower Administration
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