

173 FERC ¶ 62,105  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Dominion Energy South Carolina, LLC

Project No. 1894-211

ORDER ISSUING NEW LICENSE

(November 25, 2020)

**INTRODUCTION**

1. On June 28, 2018, South Carolina Electric & Gas Company, now identified as Dominion Energy South Carolina, Inc. (Dominion Energy),<sup>1</sup> filed, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),<sup>2</sup> an application for a new license for the continued operation and maintenance of the Parr Hydroelectric Project No. 1894 (Parr Project or project). The 526.08-megawatt (MW) project is located on the Broad River, in Newberry and Fairfield Counties, South Carolina. The project occupies 162.61 acres of federal land within Sumter National Forest, administered by the U.S. Department of Agriculture, Forest Service (Forest Service).<sup>3</sup>
2. As discussed below, this order issues a new license for the project.

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<sup>1</sup> The Parr Project was constructed in 1912-1914 by J.G. White Engineering Corporation for Parr Shoals Power Company, a subsidiary of Columbia Railway Gas and Electric Company. In 1925, the Parr Shoals Power Company was transferred to Broad River Power Company, which became SCE&G. Effective April 29, 2019, SCE&G changed the company name to Dominion Energy South Carolina, Inc. On July 29, 2019, the Commission amended the license to reflect the name change. 168 FERC ¶ 62,053 (2019).

<sup>2</sup> 16 U.S.C. §§ 797(e) and 808.

<sup>3</sup> Because the project occupies federal land and is located on a navigable waterway of the United States, it is required to be licensed pursuant to section 23(b)(1) of the FPA. 16 U.S.C. § 817(1).

## BACKGROUND

3. The Federal Power Commission, predecessor to the Federal Energy Regulatory Commission (FERC or Commission), issued the original license for the project on August 28, 1974, which expired on June 30, 2020.<sup>4</sup> Since then, project operation has continued under an annual license.<sup>5</sup>

4. Dominion Energy's license application included a Comprehensive Relicensing Settlement Agreement (Settlement Agreement) signed by Dominion Energy, U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), South Carolina Department of Natural Resources (South Carolina DNR), American Rivers, American Whitewater, Congaree Riverkeeper, and Mr. Jeffrey Carter (collectively, Settling Parties). The Settlement Agreement purports to address all issues related to the project's continued operation.

5. On July 17, 2018, the Commission published a notice<sup>6</sup> in the *Federal Register* of the Settlement Agreement, setting August 13, 2018 as the deadline for filing comments. The U.S. Department of the Interior (Interior) filed a response on August 13, 2018, stating that it had no comments.

6. On July 31, 2019, the Commission issued a public notice<sup>7</sup> accepting the application for filing, indicating the application was ready for environmental analysis, and setting September 30, 2019 as the deadline for filing motions to intervene, protests, comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions. Interior filed a notice of intervention. The Forest Service and NMFS filed preliminary conditions. Interior and NMFS filed reservations of authority to prescribe fishways. NMFS, Interior, and South Carolina DNR filed comments and recommendations. No entity opposes relicensing the project.

7. On April 21, 2020, Commission staff issued an environmental assessment (EA), analyzing the effects of the proposed project and alternatives to it, and setting a deadline

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<sup>4</sup> *South Carolina Electric & Gas Company*, 52 F.P.C. 537 (1974).

<sup>5</sup> Section 15(a)(1) of the FPA, 16 U.S.C. § 808(a)(1), requires the Commission, at the expiration of a license term, to issue from year-to-year an annual license to the then licensee under the terms and conditions of the prior license until a new license is issued, or the project is otherwise disposed of as provided in section 15 or any other applicable section of the FPA.

<sup>6</sup> 83 Fed. Reg. 33,217 (2018).

<sup>7</sup> 84 Fed. Reg. 38,961 (2019).

for comments of May 21, 2020. Dominion Energy, FWS, NMFS, South Carolina DNR, American Rivers, and Congaree Riverkeeper filed comments on the EA.

8. The motions to intervene, comments, and recommendations have been fully considered in determining whether, and under what conditions, to issue this license.

## **PROJECT DESCRIPTION**

### **A. Project Area**

9. The Broad River originates in the Blue Ridge Mountains of North Carolina and flows approximately 150 miles southeast to its confluence with the Saluda River in Columbia, South Carolina. The Broad and Saluda Rivers merge to form the Congaree River, which flows into Lake Marion. Water entering Lake Marion either flows into the Santee River or enters the Cooper River, via a diversion canal to Lake Moultrie. From either the Santee or Cooper Rivers, water flows into the Atlantic Ocean.

10. The Parr Project is located approximately 24 miles upstream of the Broad River's confluence with the Saluda River. The Parr Project is one of seven FERC-licensed hydroelectric projects on the main stem of the Broad River in South Carolina. From upstream to downstream, these include the dams at the Gaston Shoals Project No. 2332, Cherokee Falls Project No. 2880, Ninety-Nine Island Project No. 2331, Lockhart Project No. 2620, Neal Shoals Project No. 2315, Parr Project No. 1894, and Columbia Project No. 1895.

### **B. Project Facilities**

11. The Parr Project includes two developments: the 511.2-MW Fairfield Pumped Storage Development (Fairfield Development) and the 14.88-MW Parr Shoals Development (Parr Development). The Fairfield Development impounds Frees Creek, a small tributary of the Broad River, to create Monticello Reservoir (the upper reservoir). The Parr Development impounds the Broad River, creating the Parr Reservoir (the lower reservoir), and operates as a modified run-of-river facility.

#### **1. Fairfield Development**

12. The 6,600-acre Monticello Reservoir has a normal maximum elevation of 424.3 feet North American Vertical Datum of 1988 (NAVD88). Four earthen dams impound Monticello Reservoir on the west and south sides. Dam A is located on the west side of the impoundment, and has a crest length of 3,130 feet and a maximum structural height of 85 feet. Dam B is located south of Dam A on the west side of the impoundment and is the largest of the four dams, with a total length of 4,700 feet and a maximum height of 160 feet. Dam B is separated from Dam C by the development's intake structure. Dam C abuts the south side of the intake structure and has a crest length

of approximately 2,000 feet and a maximum height of 60 feet. Dam D is located just east of Dam C and has a crest length of approximately 1,300 feet and a maximum height of approximately 30 feet. Recreation Lake, an approximately 300-acre sub-impoundment, is located at the northern end of Monticello Reservoir and is separated from the main reservoir by an embankment, on which South Carolina Highway 99 is located.

13. When in generating mode, water from Monticello Reservoir passes through a 265-foot-long, concrete-lined, gated intake channel located between Dams B and C. The first 225 feet of the intake channel consists of four separate water passages that taper uniformly from the upstream trash racks to the headgate. The final 40 feet of the intake is a transitional section with four 26-foot-diameter concrete water passages at the gated end leading to the top of four 800-foot-long, 26-foot-diameter steel penstocks. Water travels downward through the four surface penstocks for 550 feet, after which each penstock bifurcates into two 270-foot-long, 18.6-foot-diameter sections. The eight water conveyances deliver water directly to the approximately 520-foot-long, 150-foot-wide, and 108-foot-tall underground reinforced concrete Fairfield Development powerhouse. The powerhouse is divided into eight 65-foot-wide bays, each bay containing one reversible pump-turbine unit with a generating capacity of 63.9 MW. Water is discharged from the powerhouse into a tailrace channel which joins Parr Reservoir about 3 miles upstream of Parr Dam. When the development is in pump-back mode, the flow of water is reversed and is pumped from Parr Reservoir to Monticello Reservoir.

14. Electricity generated at the Fairfield Development powerhouse is transmitted to the interstate grid via two, 230-kilovolt (kV), 7,000-foot-long transmission lines extending from a switch station located at the powerhouse to a switchyard located at the non-project Virgil C. Summer Nuclear Power Station (V.C. Summer Nuclear Station).

## 2. Parr Development

15. The Parr Development includes the 15-mile-long, 4,250-acre Parr Reservoir at a full pond elevation of 265.3 feet NAVD88. The 2,690-foot-long Parr Shoals Dam impounds the reservoir and spans the Broad River in a northeast-to-southwest direction. The dam is composed of a 2,000-foot-long, concrete spillway section with ten 200-foot-long bottom-hinged spillway gates; an integrated 300-foot-long powerhouse; and several non-overflow sections. The 60-foot by 300-foot concrete and steel-framed masonry powerhouse was constructed with 10 bays, but currently contains six operational 2.48-MW generating units.

16. Water from Parr Reservoir enters the Parr Development's powerhouse through an integrated intake, which consists of a headrace, trash rack system, intake gates, and water passages to the turbines. Water is released into a tailrace channel that is adjacent to the powerhouse on the downstream side of Parr Shoals Dam.

17. Electricity generated at the powerhouse is transmitted via three 950-foot-long, 13.8-kV lines extending from the hydro station to the non-project Parr sub-station.
18. A more detailed project description is contained in Ordering Paragraph (B)(2).

### **C. Project Recreation Sites**

19. Dominion Energy currently owns, operates, and maintains, or provides for the operation and maintenance of, six project recreation sites on Monticello and Parr Reservoirs. These sites offer a variety of recreation amenities that include boat ramps, docks, fishing piers, shoreline fishing access, picnic shelters, and campgrounds.

### **D. Project Boundary**

20. The project boundary encloses: the 6,600-acre Monticello Reservoir, including the Recreation Lake sub-impoundment, and the 4,250-acre Parr Reservoir up to the elevation of each reservoir's high water mark; land adjacent to each reservoir; the four earthen dams and an underground generating station at the Fairfield Development; Parr Shoals Dam; the spillway and powerhouse at Parr Shoals Dam; the transmission lines at the Fairfield and Parr Developments; and the project's six recreation sites. The project boundary's southern expanse stretches downstream to the base of Parr Shoals Dam. The northernmost extent of the project boundary follows the Parr Development's shoreline and encloses portions of the Sumter National Forest.

### **E. Project Operation**

#### **1. Fairfield Development**

21. Dominion Energy operates the Fairfield Development to provide peaking and emergency reserve capabilities for its electrical generating system. Dominion Energy pumps water from the lower reservoir (Parr Reservoir) to the upper reservoir (Monticello Reservoir) during periods of low electrical demand (at night), and generates energy from the head of the upper reservoir through four penstocks during periods of peak demand.<sup>8</sup> When the project is in pumping mode, the units can be stopped quickly and reversed to generate electricity. When not in pumping mode, the units can be brought online when needed for system generation and stability.
22. Dominion Energy operates the Fairfield Development from a control room in the Fairfield powerhouse, which is continuously staffed. At the Fairfield Development, Dominion Energy generates energy and pumps water using a storage volume in

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<sup>8</sup> Monticello Reservoir is also a source of cooling water for the V. C. Summer Nuclear Station, which is not part of the project.

Monticello Reservoir of up to 29,000 acre-feet between elevation 424.3 feet (full pool) and elevation 419.8 feet NGVD88. The pump-generation cycle occurs almost daily, resulting in a maximum daily fluctuation of 4.5 feet in Monticello Reservoir.

## 2. Parr Development

23. The Parr Development is operated in a modified run-of-river mode and uses available flows up to 4,800 cubic feet per second (cfs) at a 50 percent wicket gate opening. Although the hydraulic capacity of the turbines is approximately 6,000 cfs, this flow exceeds the rated capacity of the generators. As a result, Dominion Energy typically does not pass more than 4,800 cfs through the turbines. When inflows are below 4,800 cfs, the project turbines are operated to meet the project's minimum flow requirements, as described below. When inflows exceed 4,800 cfs, the gates on the spillway are systematically lowered to release flows in excess of 4,800 cfs to maintain a reservoir elevation no higher than 265.3 feet NGVD88.

24. Dominion Energy staffs the Parr Development 5 days per week, 8 hours per day. The turbine units are operated remotely; however, spillway gate adjustments are conducted manually during times when the station is staffed.

25. Article 14 of the current license requires Dominion Energy to provide minimum flows at the Parr Development. For striped bass spawning, Dominion Energy is required to release from Parr Shoals Dam the lesser of a 1,000 cfs instantaneous minimum flow from March to May, or the average daily inflow to Parr Reservoir, minus evaporation losses from the Parr and Monticello Reservoirs. In the remaining months, Dominion Energy is required to release from Parr Shoals Dam the lesser of a 150 cfs instantaneous flow and 800 cfs daily average flow, or the average daily inflow minus evaporation losses from Parr and Monticello Reservoirs. Minimum flows are released through the project turbines.

26. Dominion Energy also operates the project to reduce the risk of flooding downstream of Parr Shoals Dam, which can occur when flows into the reservoir reach 40,000 cfs. Article 39 of the current license requires Dominion Energy to operate the project so that releases from Parr Reservoir during flood flows are no greater than flows which would have occurred in the absence of the project. To meet this requirement, when flows exceed the hydraulic capacity of the turbines at the Parr Development, Dominion Energy incrementally lowers the crest gates at Parr Shoals Dam until 40,000 cfs passes at the dam, at which time all gates are lowered to pass all flood flows entering the project. In addition, releases from the Fairfield Development may be completely suspended until flows recede.

27. As discussed previously, Parr Reservoir serves as the lower reservoir for the Fairfield Development. Water levels in Parr Reservoir can fluctuate up to 10 feet as a

result of pumped storage operation. The normal maximum water surface elevation for Parr Reservoir is 265.3 feet NGVD88.

### **F. Proposed Project Modifications**

28. Dominion Energy proposes to upgrade all six generating units at the Parr Development, either by rewinding the stators or replacing the generators (as described in Appendix A-12 of the Settlement Agreement). The first upgrade will be completed within 3 years of license issuance, and the last of the six upgrades will be completed within 10 years of license issuance. Replacing all six generators will increase the hydraulic capacity of the Parr Development from 4,800 cfs to 7,254 cfs at maximum head, and increase the installed capacity at the Parr Development from 14.88 MW to a maximum of 22.7 MW. Rewinding some or all of the generators would result in a lesser increase in hydraulic capacity and installed capacity.

29. Dominion Energy proposes to develop one new recreation site at the Fairfield Development (Highway 99 East) and three new recreation sites at the Parr Development (Parr Shoals Dam Canoe Portage, Highway 34, and Enoree River Bridge), and expand an existing recreation site (Cannon's Creek at the Parr Development), which will require adding 22.67 acres of land to the project boundary. Dominion Energy filed, with its application, a revised project boundary map that fully encloses the new and expanded recreation sites.

### **G. Proposed Operation and Environmental Measures**

30. Dominion Energy proposes to continue to operate the Parr Project as it has under the current license with the proposed upgrades to the six generating units at the Parr Development, as described in section F above, and in accordance with the schedule set forth in an Upgrade/Replacement of Generators at Parr Shoals Development Implementation Plan (Implementation Plan) described in Appendix A-12 of the Settlement Agreement.

31. To assess and remediate shoreline erosion that has the potential to affect project operation, environmental resources, or cultural resources, Dominion Energy proposes to implement the Erosion Monitoring Plan described in Appendix A-15 of the Settlement Agreement.

32. To enhance aquatic habitat downstream of the project, Dominion Energy proposes to increase the minimum flows released from Parr Shoals Dam as described in Appendix A-3 of the Settlement Agreement.

33. To reduce daily fluctuations in flows downstream of the project, Dominion Energy proposes to implement the Flow Fluctuations Adaptive Management Plan (Flow Fluctuations AMP) described in Appendix A-2 of the Settlement Agreement.

34. To improve water quality and enhance aquatic habitat in the West Channel downstream from Parr Shoals Dam, Dominion Energy proposes to implement the environmental enhancement measures in the West Channel described in Appendix A-10 of the Settlement Agreement.

35. To increase dissolved oxygen downstream from the project, Dominion Energy proposes to implement the turbine venting plan described in Appendix A-11 of the Settlement Agreement.

36. To mitigate the effects of reservoir fluctuations on fish habitat, Dominion Energy proposes to place spawning, nursery, and deep habitat structures in Monticello Reservoir through the Monticello Reservoir Fisheries Habitat Enhancement Plan, as described in Appendix A-4 of the Settlement Agreement.

37. To address the need for an upstream eel ramp at the Parr Shoals Development, Dominion Energy proposes to monitor the number of American eels downstream of Parr Shoals Dam by implementing the American Eel Abundance Monitoring Plan described in Appendix A-5 of the Settlement Agreement.

38. To monitor the number, distribution, and species composition of mussels in Monticello Reservoir and downstream of Parr Shoals Dam, Dominion Energy proposes to implement the Freshwater Mussel Monitoring Plan described in Appendix A-6 of the Settlement Agreement.

39. To minimize the potential for entrainment of fish during pump-back operation at the Fairfield Development, Dominion Energy proposes to turn off the tailrace lighting during normal project operation, as described in Appendix A-9 of the Settlement Agreement.

40. To provide upstream and downstream passage for American shad and blueback herring, Dominion Energy proposes to continue to participate in the Santee Basin Accord for Diadromous Fish Protection, Restoration, and Enhancement (Santee Basin Accord),<sup>9</sup> as described in Appendix A-7 of the Settlement Agreement.

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<sup>9</sup> The Santee Basin Accord is an agreement among utilities with licensed hydroelectric projects and federal and state resource agencies to address diadromous fish protection, restoration, and enhancement in the Santee River Basin. SCE&G (now Dominion Energy) signed the accord on April 18, 2008. The Santee Basin Accord requires Dominion Energy to conduct a Fish Passage Feasibility Assessment within 1 year following successful passage of 50 percent of the American shad or blueback herring target restoration numbers for any 3 years in a 5-year period at the Columbia Diversion Dam Fish Passage Facility. Under the Accord, construction of a fishway at the

41. To provide funds to restore, protect, and enhance aquatic, wetland, and riparian habitats in the project area and outside the project boundary in portions of the Broad, Saluda, and Congaree River watersheds, Dominion Energy proposes to annually fund the Habitat Enhancement Program (HEP) described in Appendix A-8 of the Settlement Agreement.
42. To protect the northern long-eared bat, Dominion Energy proposes to consult with FWS prior to tree removal activities related to recreation construction and prior to forest management activities if the northern long-eared bat's presence in Fairfield and Newberry Counties is confirmed.
43. To enhance recreational opportunities at the project, Dominion Energy proposes to implement the Recreation Management Plan (RMP) described in Appendix A-1 of the Settlement Agreement, which includes provisions for developing four new recreation sites and enhancing five existing sites.
44. To protect environmental resources and scenic quality at the project, Dominion Energy proposes to implement the Shoreline Management Plan (SMP) for the Monticello Reservoir described in Appendix A-14 of the Settlement Agreement and the SMP for the Parr Reservoir described in Appendix A-13 of the Settlement Agreement.
45. To protect cultural resources, Dominion Energy proposes to implement the Historic Properties Management Plan (HPMP) described in Appendix A-18 of the Settlement Agreement and filed on January 10, 2017.

## **SUMMARY OF LICENSE REQUIREMENTS**

46. This license, which authorizes up to 533.9 MW<sup>10</sup> of renewable energy generation capacity, requires most of the proposed measures listed above, the conditions required by South Carolina Department of Health and Environmental Control's (South Carolina

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Parr Shoals dam would be required once passage of 75 percent of the target restoration numbers for American shad or blueback herring were met at the Columbia Diversion Dam Fish Passage Facility.

<sup>10</sup> This license requires Dominion Energy's Implementation Plan (Appendix A-12 of the Settlement Agreement), which provides a schedule for upgrades to the 6 generating units at the Parr Development within 10 years of license issuance. Implementing the upgrades, as described in the plan, has the potential to increase the total installed capacity of the project to a maximum of 533.9 MW. The authorized installed capacity of the project will be dependent upon the type of upgrade (i.e., rewind or replacement) and would be documented, incrementally, through revised as-built exhibits upon completion of construction for each unit.

DHEC) water quality certification (Appendix A), the Forest Service's section 4(e) conditions (Appendix B), and NMFS' section 18 fishway prescriptions (Appendix C). The license also requires certain staff-recommended modifications and additional measures described below.

47. To verify compliance with the project's operational requirements, the license requires Dominion Energy to develop an operation compliance monitoring plan.
48. To address the effects of project operation, maintenance activities, facility construction, and recreation use on shoreline erosion and sedimentation at the project, the license requires Dominion Energy to file an Erosion and Sediment Control Management Plan that includes the provisions of Forest Service 4(e) Condition 20 as well as the provisions of Dominion Energy's Erosion Monitoring Plan. The license also requires Dominion Energy to include within the plan requirements to conduct annual monitoring and, if necessary, corrective action for erosion downstream of Parr Shoals Dam at the portage's put-in to address the potential for erosion to affect recreation use at the new Parr Shoals Dam Canoe Portage. To ensure the long-term efficacy of shoreline stabilization, the license requires the plan to include monitoring of repaired areas for stability.
49. To avoid the unnecessary monitoring of freshwater mussels where the mussel population is healthy and no changes are required that would affect mussels, the license requires Dominion Energy to modify the Freshwater Mussel Monitoring Plan by removing the provisions for monitoring in Monticello Reservoir.
50. To provide effective upstream and downstream passage for American shad and blueback herring, the license requires Dominion Energy to continue to participate in the Santee Basin Accord, with the added provision that operation of any newly constructed fishways would not begin until fishway evaluations indicate that fishways will operate properly.
51. To control invasive vegetation at project recreation sites, the license requires Dominion Energy to modify the vegetation and invasive plant management plan required by Forest Service 4(e) Condition 18 to include invasive plant monitoring and control at all project recreation sites.
52. To protect environmental resources and the scenic quality of the shoreline, the license requires Dominion Energy to modify the Monticello SMP to include a provision for twice-yearly monitoring surveys of the Monticello Reservoir shoreline to detect unpermitted construction or other unauthorized land uses within the project boundary.

## WATER QUALITY CERTIFICATION

53. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>11</sup> the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification (certification) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification must become a condition of any federal license that authorizes construction or operation of the project.<sup>12</sup>

54. On August 16, 2019, Dominion Energy applied to South Carolina DHEC for water quality certification for the Parr Project, which South Carolina DHEC received the same day. On May 7, 2020, South Carolina DHEC issued a certification for the project, the conditions of which are set forth in Appendix A of this order and incorporated into the license by Ordering Paragraph (D).

55. The certification includes two conditions, one of which is general or administrative in nature and is not discussed further.<sup>13</sup> Condition 1 requires Dominion Energy to operate the Parr Project in accordance with: (1) the Flow Fluctuations AMP (Settlement Agreement Appendix A-2; certification condition 1.a); (2) the Minimum Flows Adaptive Management Plan (Settlement Agreement Appendix A-3; certification condition 1.b); (3) the West Channel Adaptive Management Plan (Settlement Agreement Appendix A-10; certification condition 1.c); (4) the Turbine Venting Plan (Settlement Agreement A-11; certification condition 1.d); and (5) the Erosion Monitoring Plan (Settlement Agreement A-15; certification condition 1.e).

## COASTAL ZONE MANAGEMENT ACT

56. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>14</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state's coastal zone management agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence

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<sup>11</sup> 33 U.S.C. § 1341(a)(1).

<sup>12</sup> *Id.* § 1341(d).

<sup>13</sup> Condition 2 stipulates that Dominion Energy must take all necessary measures during Parr Project operation and maintenance to prevent fuel, oil, tar, trash, debris, and other pollutants from entering the adjacent waters or wetlands.

<sup>14</sup> 16 U.S.C. § 1456(c)(3)(A).

is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

57. By letter filed with the license application, dated March 16, 2017, South Carolina DHEC states that relicensing the Parr Project would not affect coastal resources because the project is not within South Carolina's Coastal Zone. Therefore, a CZMA consistency certification is not required.

#### **SECTION 4(e) OF THE FPA**

58. Section 4(e) of the FPA<sup>15</sup> provides that the Commission can issue a license for a project located within a federal reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which the reservation was created or acquired. Commission staff reviewed the Organic Administration Act of 1897,<sup>16</sup> which established the purposes for forest reservations, and the presidential proclamation that created the Sumter National Forest.<sup>17</sup> There is no evidence or allegation in this proceeding to indicate that relicensing the Parr Project would interfere with the purposes of the Sumter National Forest. Therefore, the license, as conditioned, will not interfere or be inconsistent with the purposes for which the Sumter National Forest was created.

59. FPA section 4(e) further requires that Commission licenses for projects located within federal reservations include conditions that the Secretary of the department under whose supervision the reservation falls shall deem necessary for the adequate protection and utilization of such reservation. The Parr Project is partially located within Sumter National Forest, which is under the Forest Service's supervision.

60. The Forest Service filed 23 conditions for the project on August 29, 2017. Conditions 1-10, 13-17, 19, and 22 are administrative in nature and are not discussed further. The remaining conditions require: (1) a hazardous substance plan (condition 11) and compliance with pesticide-use restrictions (condition 12); (2) aquatic invasive species and vegetation and invasive weed management plans (condition 18); (3) an erosion and sediment management plan (condition 20); (4) a fire and fuels management and response plan (condition 21); and (5) a plan to design and construct recreation amenities at Keitts

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<sup>15</sup> 16 U.S.C. § 797(e).

<sup>16</sup> 16 U.S.C. § 473 *et seq.*

<sup>17</sup> The Sumter National Forest was created by Presidential Proclamation 2188, 50 Stat. 1750, issued on July 13, 1936. The Organic Administration Act of 1897, 16 U.S.C. § 475, stipulates that all national forest lands were established and administered only for watershed protection and timber production.

Bridge Landing (condition 23). The terms and conditions are set forth in Appendix B of this order and incorporated into the license by Ordering Paragraph (E).

61. Dominion Energy's proposed RMP does not include Forest Service 4(e) Condition 23, which requires Dominion Energy to improve recreation access at Keitts Bridge Landing by adding a concrete parking area, vehicle turnaround, and access path to Dominion Energy's proposed canoe/kayak step-down facility at the Enoree River Bridge Recreation Site. Therefore, Article 416 requires Dominion Energy to file, with the Commission, a revised Recreation Management Plan that incorporates the requirements of Forest Service 4(e) Condition 23.

## **SECTION 18 FISHWAY PRESCRIPTIONS**

62. Section 18 of the FPA<sup>18</sup> provides that the Commission must require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.

63. On September 30, 2019, NMFS, on behalf of the U.S. Department of Commerce, filed a preliminary fishway prescription. NMFS's fishway prescription requires Dominion Energy to:

- (1) Develop and conduct a fish passage feasibility assessment (prescription 6.3.1.1);
- (2) Develop fishway design plans (prescription 6.3.1.7);
- (3) Develop a fishway construction plan, and commence and complete construction of upstream and downstream fishways<sup>19</sup> (prescriptions 6.3.1.1, 6.3.1.2, and 6.3.1.7);
- (4) Develop a fishway operation and maintenance plan for each fishway to keep fishways in proper working order (prescription 6.3.1.2 and 6.3.1.5);
- (5) Maintain and operate fishways at the Parr Development during the upstream (March 1 to May 15) and downstream (late summer to fall) migration periods for American shad and blueback herring (prescriptions 6.3.1.2 and 6.3.1.4);

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<sup>18</sup> 16 U.S.C. § 811.

<sup>19</sup> NMFS's fishway prescription and the Santee Basin Accord do not specifically state that fishway construction would be for upstream and downstream fishways. However, in comments on the EA filed on May 21, 2020, NMFS clarified that the prescription is for the construction of upstream and downstream fishways at the Parr Development.

- (6) Follow the requirements in prescription 6.3.1.3 for modifying fishway construction and/or implementation schedules;
- (7) Develop upstream and downstream fishway effectiveness monitoring plans, conduct monitoring, and report monitoring results (prescription 6.3.1.8); and
- (8) Provide FWS, NMFS, and South Carolina DNR access to the Parr Project site and to pertinent Parr Project records for the purpose of inspecting the fishways, determining compliance with the fishway prescriptions, and for general evaluation and oversight (prescription 6.3.1.6).

64. NMFS's fishway prescriptions are attached to this order as Appendix C and are made requirements of this license by Ordering Paragraph (E).

65. By letters filed on September 30, 2019, Interior and NMFS each requested that the Commission reserve authority to prescribe fishways. Consistent with Commission policy, Article 413 of the license reserves the Commission's authority to require fishways that may be prescribed by the Secretary of the Interior or the Secretary of Commerce for the Parr Project.

66. In the EA, Commission staff did not recommend some provisions of NMFS' fishway prescriptions. In comments on the EA, filed on May 21, 2020, NMFS continued to support the prescriptions that staff did not recommend. Therefore, Commission staff's recommendations, as discussed below, are also unchanged.

67. In the EA,<sup>20</sup> Commission staff did not recommend the provision in fishway prescription 6.3.1.4 that would allow Dominion Energy to operate any constructed downstream fishway during the period of late summer to fall, because the timing of the condition is vague in that it does not have specific start and end dates. Nonetheless, operating any constructed fishway during the late-summer-to-fall period is required by the license, because it is mandatory under section 18 of the FPA. For compliance administration purposes, we are including Article 412 which requires Dominion Energy to consult with NMFS to identify the start and stop dates for prescription 6.3.1.4 and file the dates with the Commission by no later than July 31 of each license year.

68. In the EA,<sup>21</sup> Commission staff also did not recommend the provision in fishway prescription 6.3.1.4 that would allow Dominion Energy to modify, without limits, the operating schedules of any upstream or downstream fishways based on annual monitoring of migration runs. Staff concluded that without a fixed operating schedule,

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<sup>20</sup> EA at 239-240.

<sup>21</sup> EA at 240.

the Commission would be unable to independently determine whether a particular modification to the operating schedule would benefit American shad or blueback herring. Nonetheless, allowing Dominion Energy to modify the fishway operating schedules based on annual monitoring of migration runs is required by the license because it is mandatory under section 18 of the FPA. However, the license includes Article 401, which, in part, requires that Dominion Energy seek Commission approval prior to implementing any schedule changes.

69. In the EA,<sup>22</sup> Commission staff did not recommend fishway prescription 6.3.1.6 that would require Dominion Energy to provide NMFS, FWS, and South Carolina DNR access to the Parr Project site and to pertinent project records for the purpose of inspecting the fishways, determining compliance with the fishway prescriptions, and for general evaluation and oversight. These measures are unnecessary for NMFS and FWS, because Article 4 of the Commission's standard license articles already requires the licensee to provide employees of the U.S. Government access to project land and works in performance of their official duties. In addition, it is the Commission's responsibility to ensure compliance with the terms of the license. Nonetheless, the prescription is mandatory and is thus required by the license.

### **THREATENED AND ENDANGERED SPECIES**

70. Section 7(a)(2) of the Endangered Species Act of 1973<sup>23</sup> (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of designated critical habitat.

71. The federally endangered shortnose sturgeon, Atlantic sturgeon, and Carolina heelsplitter occur in the Santee River Basin, and have the potential to be affected by project operation. The federally endangered wood stork is known to occur in the adjacent Saluda River Basin, and suitable foraging habitat for transient individuals is present in the project area. The federally threatened northern long-eared bat may occur in appropriate habitat within the project area. Additionally, the federally endangered red-cockaded woodpecker, Candy's dropwort, rough-leaved loosestrife and smooth coneflower are known to occur in Richland County, downstream of the project area. There is no designated critical habitat within the project boundary for any federally-listed threatened and endangered species, or for any proposed species.

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<sup>22</sup> *Id.*

<sup>23</sup> 16 U.S.C. § 1536(a).

### **A. Shortnose and Atlantic Sturgeon**

72. In the EA,<sup>24</sup> Commission staff determined that, with the implementation of Dominion Energy's Flow Fluctuations AMP, relicensing the project is not likely to adversely affect the shortnose sturgeon or the Carolina Distinct Population Segment of Atlantic sturgeon. NMFS concurred with this finding by letter filed on October 6, 2020. Therefore, no further action under the ESA is required for these two species.

### **B. Carolina Heelsplitter**

73. In the EA,<sup>25</sup> Commission staff determined that the project would have no effect on Carolina heelsplitter given that it does not currently occur in the Broad and Congaree Rivers, including the vicinity of the Parr Project; and there are no efforts to relocate Carolina heelsplitter to areas that could be affected by project operation. Therefore, no further action under the ESA is required for this species.

### **C. Wood Stork**

74. In the EA,<sup>26</sup> Commission staff determined that the project would have no effect on wood stork. Although wood stork could periodically use portions of project lands and waters for seasonal foraging (primarily by post-dispersal migrants during the summer months), shallow backwaters, particularly in the upper reaches of the Parr Reservoir, would not be altered by proposed project operations, and shallow ponds in the Broad River and Enoree River Wildlife Management Areas would continue to be maintained as waterfowl habitat. Therefore, no further action under the ESA is required for this species.

### **D. Northern Long-eared Bat**

75. In the EA,<sup>27</sup> Commission staff recommended that Dominion Energy limit tree removal within the project boundary to November 1 through March 31 to minimize any potential adverse effects to northern long-eared bat during the pup season and broader active season, given the proximity of the project to the northern long-eared bat range and documented White-Nosed Syndrome Zone. Also, suitable roosting and foraging habitat

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<sup>24</sup> EA at 178.

<sup>25</sup> EA at 182.

<sup>26</sup> EA at 184.

<sup>27</sup> EA at 189.

exists within the project boundary and unknown maternity roosts may be present in the project area. These proposed time of year restrictions are consistent with time of year restrictions in the 4(d) rule.<sup>28</sup>

76. After issuance of the EA, Dominion Energy consulted with the FWS regarding the proposed seasonal restrictions for timber harvesting. As an alternative to staff's recommended tree removal restrictions, Dominion Energy proposed, and FWS concurred with an alternative approach. Dominion Energy proposes to limit timber harvesting on project lands to November 1 to March 31. However, if harvesting timber on project lands is necessary during a period that is outside of the November 1 to March 31 timeframe, Dominion Energy would engage a qualified biologist to survey the tract proposed for harvesting for the presence of northern long-eared bat individuals, maternity roost trees, or hibernacula during the recommended survey season of May 15 to August 15. If northern long-eared bat presence is documented during surveys, Dominion Energy would refrain from harvesting that tract outside of the November 1 to March 31 timeframe, and species documentation would be forwarded to the FWS and South Carolina DNR. If northern long-eared bat is not documented, then Dominion Energy would proceed with harvesting the tract, provided that the tract is harvested by March 31 of the year following the survey.<sup>29</sup>

77. In its concurrence letter,<sup>30</sup> FWS concurred with Dominion Energy's alternative timber harvesting approach, found the approach to be consistent with Commission staff's recommendation for the protection of northern long-eared bat, and concurred with Commission staff's determination that the project may affect, but is not likely to adversely affect, the northern long-eared bat. Article 414 requires Dominion Energy to survey for northern long-eared bats when time of year restrictions cannot be implemented, submit survey data to the Commission, FWS, and South Carolina DNR, and refrain from harvesting outside of the November 1 to March 31 timeframe if the northern long-eared bat is documented during the surveys.

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<sup>28</sup> The northern long-eared bat was listed as a federally threatened species under the ESA on May 4, 2015. In January 2016, the FWS finalized the 4(d) rule for this species, which focuses on preventing effects on bats in hibernacula associated with the spread of White-Nosed Syndrome and effects of tree removal on roosting bats or maternity colonies.

<sup>29</sup> Dominion Energy's comments on the EA filed on May 21, 2020.

<sup>30</sup> FWS concurrence with endangered species determinations and comments on the EA filed on May 19, 2020 (FWS Log No. 2012-CPA-0163).

### **E. Other Terrestrial Species**

78. In the EA,<sup>31</sup> Commission staff determined that suitable habitat for the red-cockaded woodpecker, Candby's dropwort, rough-leaved loosestrife, and smooth coneflower does not likely occur within the project boundary. Given that these four species currently are not known to occur in the counties within which the project is located, and all have specific habitat requirements not present in the project area, staff concluded that relicensing the project is not likely to adversely affect the red-cockaded woodpecker, Candby's dropwort, rough-leaved loosestrife, and smooth coneflower. FWS concurred with this finding by letter filed May 19, 2020. Therefore, no further action under the ESA is required for these species.

### **NATIONAL HISTORIC PRESERVATION ACT**

79. Under section 106 of the National Historic Preservation Act,<sup>32</sup> and its implementing regulations,<sup>33</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (National Register), defined as historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the 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.

80. To satisfy these responsibilities, the Commission executed a Programmatic Agreement (PA) on April 22, 2020 with the South Carolina SHPO, and invited Dominion Energy, the Forest Service, the Catawba Indian Nation, and the United Keetoowah Band of Cherokee Indians in Oklahoma to concur with the stipulations of the PA. Dominion Energy, the United Keetoowah Band of Cherokee Indians in Oklahoma and the Forest Service concurred. The PA requires the licensee to implement the HPMP filed on January 10, 2017. Implementation of the HPMP is required by Condition 6a of the Settlement Agreement. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 419 requires the licensee to implement the PA and HPMP.

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<sup>31</sup> EA at 187.

<sup>32</sup> 54 U.S.C. § 306108.

<sup>33</sup> 36 C.F.R. pt. 800 (2019).

## **RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES PURSUANT TO SECTION 10(j) OF THE FPA**

81. Section 10(j)(1) of the FPA<sup>34</sup> requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies pursuant to the Fish and Wildlife Coordination Act,<sup>35</sup> to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.

82. On September 30, 2019, in response to the July 31, 2019, public notice that the project was ready for environmental analysis, NMFS filed two recommendations under section 10(j). The license includes conditions consistent with NMFS’ recommendations, as follows: (1) implement the Flow Fluctuations AMP (certification condition 1.a); and (2) implement the American Eel Abundance Monitoring Plan (Article 408).

### **SECTION 10(a)(1) OF THE FPA**

83. Section 10(a)(1) of the FPA<sup>36</sup> requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

84. The measures proposed by the licensee and the staff-recommended modifications and additional measures are considered below under the broad public interest standard of section 10(a)(1) of the FPA.

#### **A. Generator Upgrades**

85. To improve generation efficiency and allow operation of the Parr Development turbines at greater gate openings under maximum normal gross head, Dominion Energy proposes to upgrade the Parr Development’s six generating units. Appendix A-12 of the Settlement Agreement includes Dominion Energy’s implementation plan and construction schedule for upgrading the generators. Dominion Energy proposes to upgrade all six generating units at the Parr Development by either rewinding the existing

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<sup>34</sup> 16 U.S.C. § 803(j)(1).

<sup>35</sup> 16 U.S.C. §§ 661 *et seq.*

<sup>36</sup> 16 U.S.C. § 803(a)(1).

stators or replacing the generators. Upgrades to all six units would be completed within 10 years of license issuance, and the first unit upgrade would be completed within 3 years of license issuance.

86. Replacing all six units would increase the installed capacity for the Parr Development from 14.88 MW to a maximum of 22.7 MW,<sup>37</sup> and the hydraulic capacity would increase from 4,800 cfs to a maximum of 7,254 cfs. The total installed capacity for the project would increase from 526.08 MW to a maximum of 533.9 MW. Rewinding the existing units at the Parr Development, rather than replacement, would result in smaller increases in installed capacity and hydraulic capacity.

87. In the EA,<sup>38</sup> Commission staff recommended the generator upgrades. Increasing generator capacity through either generator rewinds or unit replacements would allow Dominion Energy to pass more water through the turbines for generation, which could contribute to the goal of reducing flow fluctuations downstream of Parr Shoals Dam.<sup>39</sup> Article 405 approves Dominion Energy's Implementation Plan. Article 301 requires construction of the generator upgrades consistent with the Implementation Plan.

## **B. Project Operation**

88. Dominion Energy proposes to continue to operate the Parr Project, using the Fairfield Development for pumped storage generation and the Parr Development as a modified run-of-river facility.

89. Operation of the Fairfield Development results in fluctuations in the reservoir elevations of both Monticello and Parr Reservoirs. In the EA,<sup>40</sup> staff determined that the proposed daily fluctuations limits at the Monticello and Parr Reservoirs have the potential

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<sup>37</sup> The authorized installed capacity is based on the lesser of the turbine capacity and generator capacity. The authorized installed capacity at the Parr Development is limited by the generators, which are rated at 2.48 MW each, or a total of 14.88 MW for six units. The proposed generator upgrades, which total 22.7 MW, will not exceed the capacity of the turbines, which total 28.8 MW. Therefore, increasing the efficiency of the generators will increase the authorized installed capacity at the Parr Development.

<sup>38</sup> EA at 230-231.

<sup>39</sup> As discussed in the EA (at 97-100), reduced fluctuations would improve aquatic habitat and create more suitable conditions for fish that require relatively stable flows to successfully spawn.

<sup>40</sup> EA at 230.

to affect aquatic habitat, but taken in concert with other recommended mitigation measures, would be reasonably protective of fish and wildlife resources and, therefore, would provide benefits that justify their cost. Article 402 requires Dominion Energy to operate the Fairfield Development with a maximum daily fluctuation of 4.5 feet in Monticello Reservoir and 10 feet in Parr Reservoir.

90. Dominion Energy also proposes to continue operating the Parr Project to limit the effect of flood flow releases downstream of the project. Under current practice, this is accomplished by shutting down Fairfield Development generation and passing all inflow to the project downstream of Parr Shoals Dam when inflows to the Parr Development are equal to or greater than 40,000 cfs. Continuing to operate in this way would prevent the project from exacerbating downstream flooding when flows in the Broad River exceed 40,000 cfs. In the EA,<sup>41</sup> staff concluded that this operational measure, when combined with other measures to limit flow fluctuations downstream of the Parr Shoals Dam, would be reasonably protective of environmental resources, including fish and wildlife habitat. Article 403 requires Dominion Energy to continue to release flood flows from the Parr reservoir that are no greater than flood flows which would have occurred in the absence of the project.

91. Dominion Energy has not proposed to monitor compliance with the project operation, reservoir fluctuation limits, or minimum flows that could be required under a new license. Developing such a plan would ensure that the reservoir fluctuations limits required by Article 402 of the license and the flood flow requirements of Article 403 of the license are met and monitored. Therefore, Article 404 requires Dominion Energy to develop an operation compliance monitoring plan to document compliance with these requirements.

### **C. Erosion Monitoring**

92. To address shoreline erosion at the project, Dominion Energy proposes to implement an Erosion Monitoring Plan (Appendix A-15 of the Settlement Agreement), that includes monitoring 57 miles of shoreline at Monticello Reservoir twice yearly, and 88 miles of shoreline at Parr Reservoir annually. During monitoring, Dominion Energy will classify eroding shoreline as “slightly eroded,” “moderately eroded,” or “severely eroded” based on site-specific characteristics. The plan requires Dominion Energy to repair severely eroding shoreline with rip rap when erosion encroaches on the existing project boundary or threatens infrastructure or significant natural or cultural resources.

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<sup>41</sup> *Id.*

93. In the EA,<sup>42</sup> Commission staff recommended the Erosion Monitoring Plan to facilitate tracking changes in shoreline erosion over time and address areas of active erosion that encroach on environmental or cultural resources. Commission staff also recommended that Dominion Energy modify the Erosion Monitoring Plan to include provisions for monitoring erosion downstream of Parr Shoals Dam at the new Parr Shoals Dam Canoe Portage Recreation Site and provisions from Forest Service 4(e) Condition 20, which addresses erosion and sediment control protocols on Forest Service lands.

94. Commission staff recommended including monitoring of the new canoe portage in the Erosion Monitoring Plan because the changes in flow fluctuation proposed by Dominion Energy, as well as recreation use of the portage, have the potential to contribute to erosion at the site.<sup>43</sup> Monitoring would identify conditions that could affect use of the portage in a timely manner.

95. Commission staff also recommended that the provisions of Forest Service 4(e) Condition 20 be incorporated into the Erosion Monitoring Plan for administrative efficiency by consolidating the management strategies for erosion and sedimentation control at the project.<sup>44</sup> In comments on the EA,<sup>45</sup> Dominion Energy, South Carolina DNR, and American Rivers requested that the provisions of Forest Service 4(e) Condition 20 not be incorporated into the Erosion Monitoring Plan so that greater distinction could be made between the erosion and sediment control practices that Dominion Energy would use on federal and non-federal land. Such distinctions, if necessary, can be made in one plan that consolidates the federal and non-federal provisions. Therefore, the license requires that the provisions the Erosion Monitoring Plan and Forest Service 4(e) Condition 20 be incorporated into a single Erosion and Sediment Control Management Plan for the project rather than retaining two separate plans.

96. Dominion Energy, South Carolina DNR, and American Rivers also request modification of section 3.3. of the Erosion Monitoring Plan to include a provision for periodic monitoring of the stability of repaired areas. This modification would address the long-term effectiveness of Dominion Energy's shoreline stabilization efforts, consistent with the goals of the Erosion Monitoring Plan. Periodic monitoring would

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<sup>42</sup> EA at 35.

<sup>43</sup> EA at 234.

<sup>44</sup> *Id.*

<sup>45</sup> Comments of Dominion Energy and South Carolina DNR, each filed May 21, 2020, and comments of American Rivers filed May 19, 2020.

ensure Dominion Energy identifies areas of instability and can plan for remediation so that the areas continue to provide shoreline protection. Monitoring would be accomplished largely through visual observations and could be combined with Dominion Energy's erosion monitoring protocol, which would entail minimal additional effort and cost. Therefore, the benefits of this measure would be worth the cost.

97. For these reasons, Article 406 requires Dominion Energy to file a Erosion and Sediment Control Management Plan that: (1) includes all provisions of Dominion Energy's Erosion Monitoring Plan; (2) requires monitoring erosion downstream of Parr Shoals Dam at the canoe portage as part of the annual monitoring of Parr Reservoir; (3) requires monitoring the stability of repaired areas twice-yearly at Monticello Reservoir and annually at Parr Reservoir; and (4) incorporates of the provisions of Forest Service 4(e) Condition 20.

#### **D. Monticello Reservoir Fisheries Habitat Enhancement Plan**

98. Dominion Energy proposes to implement the Monticello Reservoir Fisheries Habitat Enhancement Plan (Settlement Agreement Appendix A-4) to mitigate the effect of reservoir fluctuations on fish habitat by placing spawning, nursery, and deep habitat structures in Monticello Reservoir. Commission staff recommended the plan in the EA,<sup>46</sup> and Article 407 requires that Dominion Energy implement the plan.

#### **E. Freshwater Mussel Monitoring Plan**

99. Dominion Energy proposes to implement a Freshwater Mussel Monitoring Plan to monitor the effects of project operation on freshwater mussels located in Monticello Reservoir and downstream of the Parr Development. In the EA,<sup>47</sup> Commission staff determined that implementing the Freshwater Mussel Monitoring Plan downstream of the Parr Development would sufficiently protect mussels from any adverse operational effects, including the potential for habitat dewatering. Accordingly, Article 409 requires Dominion Energy to implement the provisions of the Freshwater Mussel Monitoring Plan that are related to monitoring freshwater mussels downstream of the Parr Development.

100. In the EA,<sup>48</sup> Commission staff also determined that, based on mussel surveys conducted in 2015, continued project operation would support healthy mussel populations in Monticello Reservoir. Dominion Energy is not proposing any changes in

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<sup>46</sup> EA at 232.

<sup>47</sup> EA at 107-108.

<sup>48</sup> EA at 105-106.

project operation at the Fairfield Development that would change these conditions. Therefore, in the EA,<sup>49</sup> staff determined that there would be no project-related benefit to monitoring mussels in Monticello Reservoir and recommended that Dominion Energy revise the Freshwater Mussel Monitoring Plan to remove any provision related to monitoring freshwater mussels in Monticello Reservoir.

101. Dominion Energy, FWS, South Carolina DNR, American Rivers, and Congaree Riverkeeper each filed a letter requesting that the proposed Freshwater Mussel Monitoring Plan be included in the license in its entirety, including monitoring freshwater mussels in Monticello Reservoir.<sup>50</sup> Dominion Energy, FWS, South Carolina DNR, American Rivers, and Congaree Riverkeeper each state that the fish habitat enhancements implemented through the proposed Monticello Reservoir Fisheries Habitat Enhancement Plan have the potential to create new mussel habitat. Therefore, they conclude that the mussel surveys are needed in Monticello Reservoir to evaluate how the fish habitat enhancements protect or enhance mussel populations in Monticello Reservoir.

102. Although fish habitat enhancements may create new mussel habitat and thereby enhance mussel populations, there are no proposed operational changes that would affect the ability of mussels to successfully grow and survive in Monticello Reservoir, and therefore, there is no project-related benefit to monitoring mussels in Monticello Reservoir. Moreover, although mussel populations may increase, there is no project-specific reason to document the population increase.

103. South Carolina DNR also states that the negative impacts of project operations on aquatic resources are not fully understood and that the Freshwater Mussel Monitoring Plan would provide meaningful data to assess the impacts and management needs for Monticello Reservoir. As discussed above, surveys conducted in 2015 indicate that existing operations at the Fairfield Development support a healthy mussel population that is able to successfully survive and grow. Given that Dominion Energy has operated the Parr Project the same way for the past 40 years and has not proposed changes in project operation, there is no reason to believe these environmental conditions would change as a result of the project. We therefore conclude that additional monitoring would provide no project-related benefit.

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<sup>49</sup> EA at 234-235.

<sup>50</sup> FWS and American Rivers each filed a letter on May 19, 2020, and Dominion Energy, South Carolina DNR, and Congaree Riverkeeper each filed a letter on May 21, 2020. In a letter filed on May 21, 2020, NMFS stated that it supports the comments filed by other Settlement Agreement signatories regarding the Freshwater Mussel Monitoring Plan.

104. For the reasons discussed above, Article 409 requires Dominion Energy to remove any provisions in the Freshwater Mussel Monitoring Plan related to monitoring freshwater mussels in Monticello Reservoir. Nonetheless, Dominion Energy could monitor freshwater mussels in Monticello Reservoir pursuant to the Settlement Agreement even though this license does not require it.

#### **F. Fairfield Tailrace Lighting**

105. Dominion Energy proposes to turn off tailrace lighting during normal project operations to protect fish during pump-back operation of the Fairfield Development to minimize the potential for entrainment (Settlement Agreement Appendix A-9). Commission staff recommended the measure in the EA,<sup>51</sup> and Article 410 requires that Dominion Energy implement this measure.

#### **G. Initiating Fishway Operations**

106. Dominion Energy proposes to follow the terms of the Santee Basin Accord to: (1) conduct a fish passage feasibility assessment for upstream and downstream passage at the Parr Development, within 1 year of 46,400 American shad or 185,600 blueback herring annually passing upstream of the Columbia Diversion Dam for any 3 years in a 5-year period; and (2) initiate construction of upstream and downstream fishways at the Parr Development within 3 years of 69,600 American shad or 348,000 blueback herring annually passing upstream of the Columbia Diversion Dam for any 3 years in a 5-year period. As noted above, this measure is a mandatory fishway prescription pursuant to section 18 (NMFS prescription 6.3.1.1), and therefore, is included in the license.

107. In the EA,<sup>52</sup> Commission staff note that although Dominion Energy proposes to assess the feasibility of fishways and to construct fishways, it does not specify the triggers that would initiate the operation of upstream or downstream fishways at Parr Shoals Dam following construction.<sup>53</sup> A trigger for initiating operation also is not required by NMFS' fishway prescription nor specified in the Santee Basin Accord. Commission staff concluded in the EA that clarity is needed on the timing of the commencement of fishway operation to ensure that the measure provides the intended benefits that staff assessed pursuant to section 10(a) of the FPA.<sup>54</sup> Therefore, staff

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<sup>51</sup> EA at 232.

<sup>52</sup> EA at 235.

<sup>53</sup> EA at 235.

<sup>54</sup> *Id.*

recommended a license condition requiring that any newly constructed fishways designed for the passage of American shad and blueback herring begin operating after the fishway evaluations<sup>55</sup> required by NMFS' fishway prescription 6.3.1.7 have been completed and a report of the results has been approved by the Commission.

108. In comments on the EA, filed on May 21, 2020, NMFS states that although the fishway prescription does not define a trigger to initiate operation of any constructed fishways, the fishway prescription sets out a process for defining triggers through the establishment of the Fishery Technical Committee. NMFS also acknowledges that triggers<sup>56</sup> are not expected to be met for 10 years or longer, and therefore the fishway prescription does not include an implementation schedule at this time.

109. NMFS's response does not remedy the issue raised by staff in the EA. Including staff's recommendation in the license would provide clarity on the timing of initial fishway operation and would not conflict with the fishway prescription's process for defining triggers for operation of any constructed fishways in the fishway prescription or the development of an implementation schedule for operating any fishways at the Parr Project. Therefore, Article 411 requires that any newly constructed fishways designed for the passage of American shad and blueback herring begin operating after the fishway evaluations have been completed and a report of the results has been approved by the Commission.

## **H. Habitat Enhancement Program**

110. Dominion Energy proposes to implement a HEP for the protection and enhancement of the aquatic, wetland, and riparian habitats and associated natural resources of the Parr Project area, as well as areas outside the project area in the Broad, Saluda, and Congaree River watersheds. Dominion Energy proposes to fund the HEP annually based on the level of pumped storage operation in a given year at the Fairfield Development, not to fall below \$50,000. In the EA,<sup>57</sup> Commission staff determined that, exclusive of the proposed HEP, several measures proposed by Dominion Energy and included in NMFS's fishway prescription and the Forest Service 4(e) conditions would minimize project effects and protect aquatic and terrestrial resources that occur in the

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<sup>55</sup> Evaluation refers to the process of ensuring proper operation and design of fishways prior to opening the fishways for passage.

<sup>56</sup> The triggers that NMFS refers to in the fishway prescription are the triggers established in the Santee Basin Accord and are based on the number of American shad and blueback herring that annually pass upstream of the Columbia Diversion Dam.

<sup>57</sup> EA at 238-239.

project area. Pursuant to sections 4(e) and 10(a) of the FPA, staff concluded that these measures would provide adequate protection and enhancement for aquatic and terrestrial resources affected by the project.<sup>58</sup>

111. In the EA,<sup>59</sup> Commission staff also explained that the payment of funds for nonspecific and, as of yet, unidentified measures could benefit resources outside of the project area rather than those at the project. Therefore, they may not have a direct nexus to project effects.

112. For these reasons, Commission staff did not recommend in the EA that Dominion Energy be required to implement the HEP.<sup>60</sup>

### 1. HEP and the Geographic Scope of Cumulative Effects Analysis

113. In comments on the EA, Dominion Energy and multiple stakeholders<sup>61</sup> disagree with part of Commission staff's rationale for not recommending the HEP—specifically, staff's dismissal of the HEP because it is intended to benefit resources outside the project area. Dominion Energy and the stakeholders contend that the areas Commission staff considered outside the project area are the same areas that staff included in the geographic scope of the cumulative effects analysis for fishery resources. Because the HEP would benefit resources in areas included within the geographic scope of cumulative effects, Dominion Energy and the stakeholders argue that the HEP should be included in the license.

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<sup>58</sup> The measures are required by the license and include implementing the Erosion and Sediment Control Management Plan (Article 406), West Channel Adaptive Management Plan (certification condition 1(c)), Turbine Venting Plan (certification condition 1(d)), Minimum Flows Adaptive Management Plan (certification condition 1(b)), Flow Fluctuations Adaptive Management Plan (certification condition 1(a)), Monticello Reservoir Fisheries Habitat Enhancement Plan (Article 407), American Eel Abundance Monitoring Plan (Article 408), Monticello and Parr Reservoir SMPs (Articles 417 and 418), Vegetation and Invasive Plant Management Plan (Article 415), following the terms of the Santee Basin Accord (NMFS prescription 6.3.1.1), and turning off the tailrace lighting at the Fairfield Development (Article 410).

<sup>59</sup> EA at 239.

<sup>60</sup> *Id.*

<sup>61</sup> Multiple stakeholders include NMFS, FWS, South Carolina DNR, American Rivers, and Congaree Riverkeeper.

114. Although the HEP fund could be used to benefit resources adversely affected by the project within the entire geographic scope of cumulative effects analysis, as staff concluded pursuant to sections 4(e) and 10(a) of the FPA, the recommended measures at the project for the protection and enhancement of aquatic and terrestrial resources are sufficient for the license. For this reason, there is no basis for including additional off-site mitigation under the HEP.

## 2. HEP and Parr Reservoir Fluctuations

115. In the EA,<sup>62</sup> Commission staff determined that the water level fluctuations of up to 10 feet in Parr Reservoir would continue to expose littoral zone habitat on a daily basis, which could negatively affect nest-spawning black bass and sunfish. Staff noted, however, that the effect would be mitigated somewhat due to the ability of black bass to spawn in depths greater than 10 feet.

116. South Carolina DNR disagreed with staff's analysis of the effects of fluctuations in Parr Reservoir, stating that: (1) black bass are unlikely to spawn at depths greater than 10 feet because Parr Reservoir is turbid and black bass that spawn in deep water typically occur only in clear water lakes; and (2) black bass have lower relative abundance in Parr Reservoir (18.3 bass per hectare) compared to nearby Lake Murray (43.7 bass per hectare).<sup>63</sup> Based on this information, South Carolina DNR concludes that Parr Reservoir fluctuations have negative effects on the black bass fishery in the reservoir and that the 10-foot reservoir fluctuations limit Dominion Energy's ability to mitigate the effects at the project.

117. As South Carolina DNR contends, black bass likely do not spawn at depths greater than 10 feet in Parr Reservoir due to insufficient water clarity; therefore, we conclude, consistent with South Carolina DNR, that limiting reservoir fluctuations to 10 feet will not completely mitigate the adverse effects of project operations on black bass spawning. In the EA,<sup>64</sup> Commission staff determined that Dominion Energy's proposal and the stakeholders' recommendation to implement an HEP to fund restoration, enhancement, and protection measures outside the project area would not have benefits that would justify the costs, because the other measures we recommend would sufficiently minimize project effects on aquatic and terrestrial resources in the project area and also because the HEP provides the payment of funds for non-specific measures that could benefit resources with no direct nexus to project effects. Therefore, staff did not recommend the

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<sup>62</sup> EA at 103.

<sup>63</sup> South Carolina DNR filed comments on May 21, 2020.

<sup>64</sup> EA at 238-239.

HEP. In comments on the EA, Dominion Energy and the stakeholders<sup>65</sup> contended that the HEP was developed as a measure to address aquatic resource impacts associated with Parr Reservoir fluctuations. However, they have not provided any new information that would indicate how the HEP would specifically be used to benefit the reservoir black bass population and other fish adversely affected by the reservoir fluctuations in Parr Reservoir. Further, Dominion Energy, the stakeholders, and Commission staff have not identified any specific measures that could benefit the reservoir black bass population and other fish that use the affected littoral habitat. Therefore, Commission staff continues to find that the benefits of the HEP would not outweigh the costs and does not require the HEP. Nonetheless, Dominion Energy could fund the HEP pursuant to the Settlement Agreement even though this license does not require it.

### **I. Vegetation and Invasive Plant Management Plan**

118. In the EA,<sup>66</sup> Commission staff determined that construction of the proposed recreation facility enhancements and continued recreation use have the potential to contribute to the spread of invasive plants. Staff further determined that monitoring and controlling the spread of invasive plants would benefit native species and potentially improve the quality of recreation access and aesthetics at the project.

119. Dominion Energy does not monitor for or actively control invasive vegetation at project recreation sites. In the EA,<sup>67</sup> Commission staff recommended expanding the vegetation and invasive plant management plan required by Forest Service 4(e) Condition 18 to include invasive plant monitoring and control at all project recreation sites, in addition to the required monitoring and control of invasive vegetation on national forest system lands within the project boundary. Therefore, Article 415 requires Dominion Energy to modify the vegetation and invasive plant management plan required by Forest Service 4(e) Condition 18 to also include invasive plant monitoring and control at all project recreation sites.

### **J. Recreation Management Plan**

120. Dominion Energy proposes to implement an RMP to enhance recreational opportunities at the Parr Project. As part of the plan, Dominion Energy will continue to: (1) operate and maintain the project's six existing recreation sites (Cannon's Creek, Heller's Creek, Scenic Overlook, Highway 215, Highway 99 West, and Recreation

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<sup>65</sup> See *supra* n. 67.

<sup>66</sup> EA at 164.

<sup>67</sup> EA at 166.

Lake); (2) construct enhancements at five existing project recreation sites (Cannon's Creek, Scenic Overlook, Highway 215, Highway 99 West, and Recreation Lake); and (3) develop four new project recreation sites (Highway 99 East at the Fairfield Development and Parr Shoals Dam canoe portage, Highway 34, and Enoree River Bridge at the Parr Development).

121. In the EA,<sup>68</sup> Commission staff recommended that Dominion Energy implement the proposed RMP to enhance recreation. Dominion Energy also proposes to monitor project recreation sites as part of the Recreation Management Plan, but does not explain how Dominion Energy would use the results of monitoring to evaluate the need for changes to the RMP. To ensure that recreation at the project is adequate and managed for the term of the license, Article 416 requires Dominion Energy to file, with the Commission for approval, a revised Recreation Management Plan that includes a provision for filing a monitoring report following each recreation assessment that assesses the need for changes to the approved RMP.

#### **K. Monticello Shoreline Management Plan**

122. Dominion Energy proposes to implement an SMP for the Monticello Reservoir to protect the shoreline under five land management classifications: Project Operations, Nuclear Exclusion Zone, Shoreline Permitting, Public Recreation, and Non-Development. Docks and reservoir access paths are permitted on the reservoir, subject to provisions within the plan. Dominion Energy's proposed SMP also includes a provision to review the plan every 10 years and file any plan amendments with the Commission if the review indicates that modifying the plan is necessary.

123. In the EA,<sup>69</sup> Commission staff recommended that Dominion Energy modify the proposed SMP to include a provision for quarterly monitoring surveys of the shoreline for the purposes of SMP compliance and managing shoreline development in a way that protects environmental and cultural resources. Staff concluded that the provisions of the SMP, along with the monitoring component, would allow Dominion Energy to continue to balance residential development with maintaining areas for natural resource protection and recreation.

124. Dominion Energy, in comments on the EA,<sup>70</sup> provided multiple reasons for twice-yearly monitoring. These reasons included that there has been minimal shoreline development over the term of the current license, a relatively small number of dock

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<sup>68</sup> EA at 232.

<sup>69</sup> EA at 232-233.

<sup>70</sup> Dominion Energy filed comments on May 21, 2020.

permit applications, low population growth in the locality, and dedicated compliance inspections.

125. In consideration of Dominion Energy's stated reasons, twice-yearly monitoring coordinated with the proposed shoreline erosion monitoring, and any subsequent mitigation actions, should sufficiently protect the Monticello Reservoir shoreline. The costs of this measure would be minimal and represent a savings over the quarterly monitoring recommended by staff in the EA. Therefore, Article 417 requires Dominion Energy to file, with the Commission, a revised Monticello SMP that includes a twice-yearly monitoring provision.

### **L. Parr Shoreline Management Plan**

126. Dominion Energy proposes to implement an SMP for the Parr Reservoir to protect the shoreline under three land management classifications: Project Operations, Public Recreation, and Non-Development. Reservoir access paths are permitted on the reservoir, subject to provisions within the plan. Dominion Energy's proposed SMP also includes a provision to review the plan every 10 years and file any plan amendments with the Commission if the review indicates that modifying the plan is necessary.

127. In the EA,<sup>71</sup> Commission staff recommended that Dominion Energy implement the proposed SMP. Staff concluded that implementing the proposed SMP would allow Dominion Energy to continue to balance residential development with maintaining areas for natural resource protection and recreation. Article 418 approves the Parr SMP and requires Dominion Energy to implement the provisions therein.

### **M. Comments on the EA**

#### **1. General Comments**

128. In its comments on the EA, Dominion Energy states that Commission staff incorrectly reference the Guadalupe River instead of the Broad River in the third paragraph on page 128 of the EA. As noted by Dominion Energy, the Guadalupe River on page 128 of the EA is incorrect and should have instead referenced the Broad River.

129. South Carolina DNR comments that the EA should state that the Flow Fluctuations AMP would "reduce" rather than "eliminate" effects of project operations and flow fluctuations downstream. First, on page 179, the EA states: "To eliminate the effects of project operations on shortnose sturgeon spawning behavior, Dominion Energy proposes to implement its Flow Fluctuations AMP, which includes a provision to stabilize downstream flows for 14 days during the period between March 15 and

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<sup>71</sup> EA at 232-233.

March 31.” Second, on page 181, the EA states: “To eliminate the effect of these fluctuations on shortnose sturgeon, American shad, striped bass, and robust redhorse spawning behavior, Dominion Energy proposes to implement the Flow Fluctuations AMP to stabilize downstream flows during these species’ spawning periods.” Because the Flow Fluctuations AMP would not completely “eliminate” flow fluctuations, the word “reduce” more accurately reflects the goal of the Flow Fluctuations AMP, which is to closely match inflow and outflow and maintain a more constant discharge during the 14-day period.

## 2. Costs Associated with Environmental Measures

130. Dominion Energy contests Commission staff’s lack of a cost estimate to implement the Flow Fluctuations AMP.<sup>72</sup> Dominion Energy notes that in its application, it included an estimate for this measure of \$3,260,664.

131. Although Dominion Energy has identified general measures at a cost of \$3,260,664, that, through an adaptive management process, could be proposed to the Commission in future proceedings, these measures are speculative and uncertain at this time. Therefore, in the EA,<sup>73</sup> Commission staff did not assign a cost to these measures.

## 3. Fish Entrainment and Turbine Mortality

132. South Carolina DNR takes issue with Commission staff’s analysis in section 3.3.2.2, *Environmental Effects, Impingement, Entrainment, and Turbine Mortality*. South Carolina DNR contends that staff underestimated the level of entrainment and turbine mortality because staff’s analysis of burst swim speeds did not include the smallest size classes of fish, which South Carolina DNR concludes have slower burst swim speeds and therefore would be susceptible to entrainment and turbine mortality.

133. The EA’s entrainment and turbine mortality analysis did not assess the specific burst speeds for the smallest size classes of fish because such information is limited or nonexistent. However, such precise information is unnecessary, because staff conservatively assumed that the smallest size classes of fish could easily pass between the bars of the trash rack, be unable to swim against the intake flow, and thereby be susceptible to powerhouse entrainment and turbine mortality. However, compared to larger fish, smaller fish have a lower probability of mechanical strike when passing through turbines and generally exhibit higher turbine passage survival. Therefore, the EA did not underestimate the extent of fish entrainment and turbine mortality as suggested by South Carolina DNR, and we affirm our conclusion in the EA that project operation

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<sup>72</sup> Dominion Energy filed comments on the EA on May 21, 2020.

<sup>73</sup> EA at 229.

would likely have little to no adverse effect on the fish community in Parr Reservoir or the Broad River.

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

134. The Commission collects annual charges from licensees for administration of the FPA and to compensate for the use and occupancy of United States land. Article 201 provides for the collection of funds for administration of the FPA and the use and occupancy of federal land.

135. Article 405 approves Dominion Energy's proposal to upgrade the generator units at the Parr Development, either by rewinding the stator or replacing the units, in accordance with the schedule set forth in the Implementation Plan in Appendix A-12 of the Settlement Agreement.<sup>74</sup> The total installed capacity of the project will increase from 526.08 MW to a maximum of 533.9 MW.

136. In accordance with section 11.1(c)(5) of the Commission's regulations, the assessment of annual charges starts on the date the licensee is required to commence construction of the additional capacity.<sup>75</sup> Consistent with Commission policy, annual charges will be revised in accordance with the construction schedule authorized in Article 301.

### **B. Exhibit A Project Description**

137. Commission regulations require that licensees file as part of the license application an Exhibit A that describes the project. Ordering paragraph (C) approves Exhibit A. Article 205 requires that, upon completion of each generator unit upgrade approved in this order, the licensee must submit an updated Exhibit A to the Commission including the as-built details of the generator upgrades.

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<sup>74</sup> The schedule reflected in Dominion Energy's proposed Implementation Plan for upgrading all six generator units at the Parr Development anticipates the first unit will be upgraded within three years from issuance of the license. Subsequent units will be upgraded one each year, after testing and acceptance of the initial unit, so that all upgrades will be completed within ten years after license issuance.

<sup>75</sup> 18 C.F.R. § 11.1(c)(5) (2020).

### **C. Exhibit F and G Drawings**

138. The Commission requires licensees to file sets of approved project drawings in electronic file format. Ordering paragraph (C) approves Exhibits F and G. Article 202 requires the filing of these drawings in electronic format.

### **D. Amortization Reserve**

139. The Commission requires that for new major licenses, non-municipal licensees set up and maintain an amortization reserve account upon license issuance. Article 203 requires the establishment of the account.

### **E. Headwater Benefits**

140. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 204 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

### **F. As-Built Exhibits**

141. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised exhibits of project features as-built. Article 205 provides for the filing of these exhibits which would include the as-built details of the generator upgrades approved in this order. In addition, Article 205 requires photographs of the nameplates for the turbines and generators after the approved generator upgrades are completed.

### **G. Modifications of Project Facilities**

142. Article 302 requires the licensee to coordinate with the Commission's Division of Dam Safety and Inspections—Atlanta Regional Engineer about any proposed modifications resulting from environmental requirements that would affect project works, dam safety, or project operation.

### **H. Use and Occupancy of Project Lands and Waters**

143. Requiring a licensee to obtain prior Commission approval for every use and occupancy of project land would be unduly burdensome. Therefore, Article 420 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

### **I. Commission Approval of Resource Plans, Notification, and Filing of Amendments**

144. In Appendices A, B, and C there are certain certification conditions, section 4(e) conditions, and section 18 fishway prescriptions that: (1) require the licensee to (a) prepare plans in consultation with other entities or for approval by the conditioning agencies, and implementing the specific measures without prior Commission approval, or (b) do not specify when the plan(s) would be filed with the Commission for approval; (2) require agency, but not Commission notification of deviations from license requirements; or (3) contemplate non-specific and uncertain long-term changes to project facilities, operations, or license conditions. Therefore, Article 401 requires the licensee to file the plans with the Commission for approval, notify the Commission of planned and unplanned deviations from license requirements, and file amendment applications, as appropriate.

### **J. Operational Deviations**

145. To provide for administrative efficiency and allow the licensee the flexibility to quickly address project-related situations requiring short-term deviations, Article 402 allows planned, short-term deviations from reservoir elevation limits, minimum flows, and flow fluctuations downstream of Parr Shoals dam after mutual agreement among the licensee, FWS, South Carolina DNR, and South Carolina DHEC. The article specifies reporting procedures the licensee must follow regarding such planned deviations. Article 402 also includes reporting requirements that the licensee must follow in the event of unplanned deviations from operational requirements, based on the duration of the event, and any observed or reported effects of the deviations. Under the article, unplanned deviations from reservoir elevation limits and minimum flow requirements that do not exceed three hours in duration (from the time the deviation starts until the time compliance is resumed) and for which there are no observed or reported environmental effects, do not need to be reported to the Commission individually, but can instead be included in an annual report that describes these minor incidents. Unplanned deviations from reservoir elevation limits and minimum flow requirements that exceed three hours in duration must be reported to the Commission individually.

## **STATE AND FEDERAL COMPREHENSIVE PLANS**

146. Section 10(a)(2)(A) of the FPA<sup>76</sup> requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving,

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<sup>76</sup> 16 U.S.C. § 803(a)(2)(A).

developing, or conserving a waterway or waterways affected by the project.<sup>77</sup> Under section 10(a)(2)(A), Commission staff identified 25 comprehensive plans that are relevant to this project.<sup>78</sup> No conflicts were found.

## **APPLICANT'S PLANS AND CAPABILITIES**

147. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,<sup>79</sup> Commission staff evaluated Dominion Energy's record as a licensee with respect to the following: (A) conservation efforts; (B) compliance history and ability to comply with a new license; (C) safe management, operation, and maintenance of the project; (D) ability to provide efficient and reliable electric service; (E) need for power; (F) transmission services; (G) cost-effectiveness of plans; and (H) actions affecting the public. This order accepts staff's findings in each of the following areas.

### **A. Conservation Efforts**

148. Section 10(a)(2)(C) of the FPA<sup>80</sup> requires the Commission to consider the electricity consumption efficiency improvement programs in the case of license applicants primarily engaged in the generation or sale of electric power, like Dominion Energy. Each year, Dominion Energy completes a comprehensive analysis of future load growth and the need for new resources, including customer efficiency programs, to meet its customer demand. Customer conservation is encouraged through Dominion Energy's energy efficiency programs. Dominion Energy has three programs to promote cost-effective conservation and load management for residential, commercial, industrial, and agricultural customers. These include: (1) the Value Visit Program designed to assist residential electric customers who are considering an investment in upgrading their home's energy efficiency; (2) the Rate 6 Energy Saver/Energy Conservation Program that rewards homeowners and home builders who upgrade their existing homes or build their new homes to a high level of energy efficiency with a reduced electric rate; and (3) Seasonal Rates whereby energy provided in the peak usage season is charged a premium to encourage conservation and efficient use of energy. These programs show that Dominion Energy is making an effort to conserve electricity and has made a satisfactory good faith effort to comply with section 10(a)(2)(C) of the FPA.

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<sup>77</sup> Comprehensive plans are defined at 18 C.F.R. § 2.19 (2020).

<sup>78</sup> The list of applicable plans can be found in section 5.4 of the EA.

<sup>79</sup> 16 U.S.C. §§ 803(a)(2)(C) and 808(a).

<sup>80</sup> *Id.* §§ 803(a)(2)(C).

### **B. Compliance History and Ability to Comply with New License**

149. Based on a review of Dominion Energy's compliance with the terms and conditions of the existing license, staff finds that Dominion Energy's overall record of making timely filings and compliance with its license is satisfactory. Therefore, staff believes that Dominion Energy can satisfy the conditions of a new license.

### **C. Safe Management, Operation, and Maintenance of the Project**

150. Commission staff has reviewed Dominion Energy's record of management, operation, and maintenance of the project pursuant to the requirements of 18 C.F.R. Part 12 of the Commission's Engineering Guidelines and periodic Independent Consultant's Safety Inspection Reports. Commission staff concludes that the dam and other project works are safe, and that there is no reason to believe that Dominion cannot continue to safely manage, operate, and maintain these facilities under a new license.

### **D. Ability to Provide Efficient and Reliable Electrical Service**

151. Commission staff has reviewed Dominion Energy's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Dominion Energy's powerhouse equipment is monitored by various general control systems and alarms. Since the project has been in operation, Dominion Energy has undertaken several initiatives to ensure the project is able to operate reliably into the future. Therefore, Dominion Energy is capable of operating the project to provide efficient and reliable electric service in the future.

### **E. Need for Power**

152. The project would provide hydroelectric generation to meet part of South Carolina's power requirements, resource diversity, and capacity needs. With Dominion Energy's proposed generator upgrades, the project would have an installed capacity of up to 533.9 MW and generate approximately 716,475 MWh per year at the maximum installed capacity.

153. The Parr Project is located in the SERC Reliability Corporation (SERC) region of the North American Electric Reliability Corporation (NERC), in the east sub-region (SERC-E). The NERC annually forecasts electric supply and demand nationally and regionally for a 10-year period. For the 2019-2028 time period, the SERC-E region will need to add 2,933 MW of capacity to meet the summer peak demand. This represents a demand increase of 6.5 percent over the 10-year period, or an annual growth rate of about 0.72 percent. The power from the proposed project would help meet a need for power in the SERC-E region in both the short and long-term.

### **F. Transmission Services**

154. The project includes two 7,000-foot-long transmission lines delivering power to a switchyard located at the non-project V.C. Summer Nuclear Station, and three 950-foot-long transmission lines delivering power to the non-project Parr sub-station. Dominion Energy is proposing no changes that would affect its own or other transmission services in the region. The project and project transmission lines are important elements in providing power and voltage control to about 2.5 million retail and wholesale customers in South Carolina and the Southeast.

### **G. Cost Effectiveness of Plans**

155. Dominion Energy proposes several modifications to project facilities and environmental measures for the enhancement of fish and wildlife at the project. Based on Dominion Energy's record as an existing licensee, staff concludes that these plans are likely to be carried out in a cost-effective manner.

### **H. Actions Affecting the Public**

156. Dominion Energy provided opportunity for public involvement in the development of its application for a new license for the Parr Project. In addition to using the project to help meet local power needs, during the previous license period Dominion Energy provided facilities to enhance the public use of project lands and operated the project with consideration for the protection of downstream uses of the Broad River.

## **PROJECT ECONOMICS**

157. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corporation*,<sup>81</sup> the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license. In applying this analysis to the Parr Project, staff considered four options: a no-

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<sup>81</sup> 72 FERC ¶ 61,027 (1995).

action alternative, Dominion Energy's proposal, a staff alternative, and the project as licensed herein.<sup>82</sup>

158. Under the no-action alternative, the project would continue to operate as it does now. The project has an installed capacity of 526.08 MW and generates an average of 716,475 MWh of electricity annually. The cost of alternative power is about \$319,624,060, or about \$446/MWh.<sup>83</sup> The annual project cost is about \$30,162,043, or about \$42.1/MWh. To determine whether the project is currently economically beneficial, the project cost is subtracted from the cost of alternative power. Therefore, the project costs \$289,462,017, or \$404/MWh, less to produce than the cost of alternative power.

159. As proposed by the licensee, the proposed project would have an installed capacity of up to 533.9 MW and generate an average of 732,092 MWh of electricity annually. The cost of alternative power would be about \$320,077,650, or about \$437/MWh. The average annual project cost would be about \$31,926,600 or about \$43.6/MWh. Therefore, the project would produce power at a cost that is \$288,151,050, or about \$394/MWh, less than the cost of alternative power under the licensee's proposal.

160. The staff alternative would have the same capacity and energy attributes as the applicant's proposal but would include the cost of the staff environmental measures. The annual project cost would be about \$31,838,249, or about \$43.5/MWh. Therefore, the project would produce power at a cost that is \$288,239,401, or about \$394/MWh, less than the cost of alternative power under the staff alternative.

161. Mandatory Conditions include NMFS Fishway Prescription Conditions 4 and 6, and Forest Service Conditions 13, 14, 19, and 22. As licensed herein with mandatory conditions and staff measures, the project would have the same installed capacity and energy attributes as the applicant's proposal and staff alternative, but would include the cost of the staff measures and mandatory conditions. The average annual project cost would be about \$31,877,467, or about \$43.5/MWh. Therefore, the project would produce power at a cost that is \$288,200,138, or \$394/MWh, less than the cost of alternative power as licensed herein.

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<sup>82</sup> Details of Commission staff's economic analysis for the project as licensed herein, and for the other two alternatives, are included in section 4.0 of the EA.

<sup>83</sup> The cost of alternative power is based on the assumption that an advanced combustion turbine would be the most likely source of alternative power, at a cost of \$160.50/ MWh, and approximately 511 MW of dependable capacity would be valued at \$402/kW-year.

162. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include the ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid changes in system load; and to respond rapidly to a major utility system or regional blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back on line.

163. Although Commission staff does not explicitly account for the effect inflation may have on the future cost of electricity, the fact that hydropower generation is relatively insensitive to inflation compared to fossil-fueled generators is an important economic consideration for power producers and the consumers they serve. This is one reason project economics is only one of the many public interest factors the Commission considers in determining whether, and under what conditions, to issue a license.

### **COMPREHENSIVE DEVELOPMENT**

164. Sections 4(e) and 10(a)(1) of the FPA<sup>84</sup> require the Commission to give equal consideration to power development purposes and to the purposes of energy conservation; the protection, mitigation of, damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued must be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

165. The EA for the project contains background information, analysis of effects, and support for related license articles. Based on the record of this proceeding, including the EA and the comments thereon, licensing the Parr Project, as described in this order, will not constitute a major federal action significantly affecting the quality of the human environment. The project will be safe if operated and maintained in accordance with the requirements of the license.

166. Based on Commission staff's independent review and evaluation of the Parr Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the project as licensed herein, is best adapted to a comprehensive plan for improving or developing the Broad River.

167. This alternative is selected because: (1) issuing a new license will serve to maintain a beneficial and dependable source of electric energy; (2) the required environmental measures will protect or enhance fish and wildlife resources, water

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<sup>84</sup> 16 U.S.C. §§ 797(e) and 803(a)(1).

quality, recreation, and cultural resources; and (3) the 533.9 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

## LICENSE TERM

168. In its license application, Dominion Energy requests a 50-year license term, contending that an exception to the 40-year default license term is warranted by the substantial costs of the voluntary measures it proposes under the new license. Among other things in support of its request,<sup>85</sup> Dominion Energy estimates that it will cost \$18 million to upgrade all six generators at the Parr Development.

169. Section 15(e) of the FPA<sup>86</sup> provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. On October 19, 2017, the Commission established a 40-year default license term policy for original and new licenses, effective as of October 26, 2017.<sup>87</sup> The Policy Statement provides for exceptions to the 40-year default license term under certain circumstances: (1) establishing a shorter or longer license term if necessary to coordinate license terms for projects located on the same river basin; (2) deferring to a shorter or longer license term explicitly agreed to in a generally-supported comprehensive settlement agreement; and (3) establishing a longer license term upon a showing by the license applicant that substantial voluntary measures were either previously implemented during the prior license term, or substantial new measures are expected to be implemented under the new license. The policy statement also explains that the Commission will consider, on a case-by-case basis, whether the costs of non-developmental (i.e., environmental) measures, and power and developmental measures are significant and warrant a longer license term.

170. On October 23, 2018, the America's Water Infrastructure Act of 2018 was enacted.<sup>88</sup> Among other things, the Act added section 36 to the FPA, which, as relevant here, requires the Commission to consider project-related investments by the licensee

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<sup>85</sup> Dominion Energy's additional grounds for seeking an exception to the 40-year default license include financial losses that will be incurred due to lost generation and lost lands sales caused by implementing the proposed environmental measures, and the cost to prepare the license application.

<sup>86</sup> 16 U.S.C. § 808(e).

<sup>87</sup> *Policy Statement on Establishing License Terms for Hydroelectric Projects*, 161 FERC ¶ 61,078 (2017) (Policy Statement); 82 Fed. Reg. 49,501 (Oct. 26, 2017).

<sup>88</sup> Pub. L. No. 115-270, 132 Stat. 3765 (2018).

under the new license, including “investments relating to redevelopment, new construction, new capacity, efficiency, modernization, rehabilitation or replacement of major equipment, safety improvements, or environmental, recreation, or other protection, mitigation, or enhancement measures required or authorized by the new license.”<sup>89</sup>

171. Dominion Energy’s proposed investments in the Parr Development’s generators justify a longer license term. Dominion Energy’s investments include upgrading all six generator units through replacement or refurbishment of major components. Because Dominion Energy’s investments are related to improving the efficiency of, modernizing, and rehabilitating existing major equipment, they qualify under the 2018 Water Infrastructure Act. Therefore, a 50-year license term is appropriate for the Parr Project.

The Director orders:

(A) This license is issued to Dominion Energy South Carolina, LLC (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to operate and maintain the Parr Hydroelectric Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee’s interests in those lands, enclosed by the project boundary shown by Exhibit G filed June 28, 2018.

<b>Exhibit</b>	<b>FERC Drawing No.</b>	<b>Drawing Title<sup>90</sup></b>
G-1	P-1894-1001	Project Area
G-2	P-1894-1002	Project Area
G-3	P-1894-1003	Project Area
G-4	P-1894-1004	Project Area
G-5	P-1894-1005	Project Area

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<sup>89</sup> 16 U.S.C.A. §§ 823g(a), (b). We note that this is a broader list of activities than the Commission discussed in its 2017 Policy Statement.

<sup>90</sup> The exact filename drawing titles must be used in the filename when filing the electronic file format drawings required in Article 202. Commission staff shortened the drawing titles due to filename character limits. There is no need to modify the titles as they appear on the drawings.

<b>Exhibit</b>	<b>FERC Drawing No.</b>	<b>Drawing Title<sup>90</sup></b>
G-6	P-1894-1006	Project Area
G-7	P-1894-1007	Project Area
G-8	P-1894-1008	Project Area
G-9	P-1894-1009	Project Area
G-10	P-1894-1010	Project Area
G-11	P-1894-1011	Project Area
G-12	P-1894-1012	Project Area
G-13	P-1894-1013	Project Area
G-14	P-1894-1014	Project Area
G-15	P-1894-1015	Project Area
G-16	P-1894-1016	Project Area
G-17	P-1894-1017	Project Area
G-18	P-1894-1018	Project Area
G-19	P-1894-1019	Project Area

(2) Project works consisting of:

Fairfield Pumped Storage Development

The Fairfield Pumped Storage Development, which includes: (1) the 6,600-acre Monticello Reservoir, which serves as the upper reservoir and has a normal maximum elevation of 424.3 feet North American Vertical Datum of 1988 (NAVD88); (2) four earthen dams (3,130-foot-long dam A, 4,700-foot-long dam B, 2,000-foot-long dam C, and 1,300-foot-long dam D, each with a crest elevation of 433.3 feet NAVD88), which impound Monticello Reservoir; (3) a 265-foot-long concrete gated intake channel located between dams B and C; (4) four, 800-foot-long surface penstocks bifurcating into eight penstocks connected to the generating station; (4) a 520-foot-long by 150-foot-wide underground powerhouse, which houses eight, 63.9 megawatt (MW) reversible pump-turbine units, with an installed capacity totaling 511.2 MW; (5) two 230-kilovolt (kV) 7,000-foot-long transmission lines extending from the Fairfield Pumped Storage Development switch station to a switchyard located at the non-project Virgil C. Summer Nuclear Power Station; and (6) appurtenant facilities.

### Parr Shoals Development

The Parr Shoals Development which includes: (1) the 15-mile-long, 4,250-acre Parr Reservoir, which serves as the lower reservoir for the Fairfield Pumped Storage Development, and has a full pond elevation of 265.3 feet NAVD88; (2) the 2,690-foot-long Parr Shoals Dam, which impounds the reservoir and includes: (a) a 390-foot-long east section, (b) a 2,000-foot-long, 37-foot-high, gated spillway section with ten, 200-foot-long bottom-hinged spillway gates, and six inoperable sluice gates, (c) a 300-foot-long west section; (4) a powerhouse intake integral with the dam which leads to a 60-foot-wide by 300-foot-long concrete powerhouse that contains six vertical Francis generating units with an installed capacity totaling 14.88 MW; (5) three 950-foot-long, 13.8-kV transmission lines extending from the hydro station to the non-project Parr sub-station; and (6) appurtenant facilities.

The project works generally described above are more specifically described and shown by those portions of Exhibits A and F specified below:

Exhibit A: The following sections of Exhibit A filed on June 28, 2018:

Pages A-1 through A-4 describing features of the Parr Development, Pages A-5 through A-10 describing features of the Fairfield Development, and Exhibit A-2 providing a summary of standard project numbers of the Parr and Fairfield Developments.

Exhibit F: The following Exhibit F drawings filed on June 28, 2018.

<b>Exhibit</b>	<b>FERC Drawing No.</b>	<b>Drawing Title</b>	<b>Filename Drawing Title<sup>91</sup></b>
F-1	P-1894-1020	Section Through Fairfield Powerhouse	Fairfield Powerhouse
F-2	P-1894-1021	Fairfield Intake and Penstock	Fairfield Intake
F-3	P-1894-1022	Fairfield Dam A	Fairfield Dam A
F-4	P-1894-1023	Fairfield Dam B	Fairfield Dam B
F-5	P-1894-1024	Fairfield Dams C and D	Fairfield Dams C and D
F-6	P-1894-1025	Rout 99 Relocation Embankment	Route 99 Embankment

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<sup>91</sup> *Id.*

<b>Exhibit</b>	<b>FERC Drawing No.</b>	<b>Drawing Title</b>	<b>Filename Drawing Title<sup>91</sup></b>
F-7	P-1894-1026	Dike Along S.C. Hwy. 215	Highway 215 Dike
F-8	P-1894-1027	Parr Dam and General Arrangement	Parr Dam
F-9	P-1894-1028	Parr Powerhouse	Parr Powerhouse
F-10	P-1894-1029	Parr Powerhouse and General Arrangement	Parr Powerhouse
F-11	P-1894-1030	Fairfield Powerhouse and General Arrangement	Fairfield Powerhouse

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, F, and G described above are approved and made part of the license.

(D) This license is subject to the conditions submitted by the South Carolina Department of Health and Environmental Control (South Carolina DHEC) under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1), as those conditions are set forth in Appendix A to this order.

(E) This license is subject to the conditions submitted by the U.S. Forest Service under section 4(e) of the FPA, as those conditions are set forth in Appendix B to this order.

(F) This license is subject to the conditions submitted by the Secretary of the U.S. Department of Commerce under section 18 of the FPA, as those conditions are set forth in Appendix C to this order.

(G) This license is also subject to the articles set forth in Form L-5 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters and Lands of the United States" (see 54 F.P.C. 1799 et seq.), as reproduced at the end of this order, and the following additional articles:

Article 201. Administrative Annual Charges. The licensee must pay the United States annual charges, effective the first day of the month in which the license is issued, and as determined in accordance with provisions of the Commission's regulations in effect from time to time, for the purpose of:

(a) Reimbursing the United States for the cost of administering Part I of the Federal Power Act. The authorized installed capacity for that purpose is 526.08 MW.

(b) Recompensing the United States for the use, occupancy, and enjoyment of 162.61 acres of its lands (other than for transmission line right-of-way)

Article 202. Exhibit Drawings. Within 45 days of the date of issuance of this license, as directed below, the licensee must file the approved exhibit drawings, Form FERC-587, and geographic information system (GIS) data in electronic file format.

(a) The licensee must prepare digital images of the approved exhibit drawings in electronic format. Prior to preparing each digital image, the licensee must add the FERC Project-Drawing Number (i.e., P-1894-1001 through P-1894-1030) in the margin below the title block of the corresponding approved drawing. The licensee must separate the Exhibit F drawings from the other project exhibits, and **label and file them as Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. § 388.113** (The submission should consist of: (1) a public portion consisting of a cover letter, the Exhibit G drawings, form FERC-587, and GIS data; and (2) a CEII portion containing only the Exhibit F drawings). Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit Number, Filename Title, date of this order, and file extension in the following format [P-1894-1001, G-1, Project Area, MM-DD-YYYY.TIF].

Each Exhibit G drawing that includes the project boundary must contain a minimum of three known reference points (i.e., latitude and longitude coordinates, or state plane coordinates), arranged in a triangular format for GIS georeferencing the project boundary drawing to the polygon data. The licensee must identify the spatial reference for the drawing (i.e., map projection, map datum, and units of measurement) on the drawing and label each reference point. In addition, a registered land surveyor must stamp each project boundary drawing. All digital images of the exhibit drawings must meet the following format specification:

IMAGERY:	black & white raster file
FILE TYPE:	Tagged Image File Format (TIFF) CCITT Group 4 (also known as T.6 coding scheme)
RESOLUTION:	300 dots per inch (dpi) desired, (200 dpi minimum)
DRAWING SIZE:	22" x 34" (minimum), 24" x 36" (maximum)
FILE SIZE:	less than 1 megabyte desired

The licensee must file a third set of the digital images (Exhibit G only) and a copy of Form FERC-587 with the Bureau of Land Management office at the following address:

BLM Eastern States State Office  
20 M Street SE, Suite 950  
Washington, DC 20003  
ATTN: FERC Withdrawal Recordation

Form FERC-587 is available through the Commission's website at the following URL: <https://www.ferc.gov/sites/default/files/2020-04/Form587.pdf>. A hard copy of Form FERC-587 is available by mailing a request to the Secretary of the Commission.

(b) Project boundary GIS data must be in a georeferenced electronic file format (such as ArcGIS shapefiles, GeoMedia files, MapInfo files, or a similar GIS format). The filing must include both polygon data and all reference points shown on the individual project boundary drawings. Each project development must have an electronic boundary polygon data file(s). Depending on the electronic file format, the polygon and point data can be included in single files with multiple layers. The georeferenced electronic boundary data file must be positionally accurate to  $\pm 40$  feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) must include: FERC Project Number, data description, date of this order, and file extension in the following format [P-1894, boundary polygon or point data, MM-DD-YYYY.SHP]. The filing must include a separate text file describing the spatial reference for the georeferenced data: map projection used (*i.e.*, UTM, State Plane, Decimal Degrees, *etc.*), the map datum (*i.e.*, North American 27, North American 83, *etc.*), and the units of measurement (*i.e.*, feet, meters, miles, *etc.*). The text file name must include: FERC Project Number, data description, date of this order, and file extension in the following format [P-1894, project boundary metadata, MM-DD-YYYY.TXT].

In addition, for those projects that occupy federal lands, the filing must include a separate georeferenced polygon file(s) that identifies transmission line acreage and non-transmission line acreage affecting federal lands. The file(s) must also identify each federal owner (*e.g.*, Bureau of Land Management, Forest Service, U.S. Army Corps of Engineers, *etc.*), land identification (*e.g.*, forest name, Section 24 lands, national park name, *etc.*), and federal acreage affected by the project boundary. Depending on the georeferenced electronic file format, a single file with multiple layers may include the polygon, point, and federal lands data.

Article 203. Amortization Reserve. Pursuant to section 10(d) of the Federal Power Act, a specified reasonable rate of return upon the net investment in the project must be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee must set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee must deduct the amount of that

deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee must set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee must maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves must be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios must be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity must be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 204. *Headwater Benefits.* If the licensee's project was directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee must reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 205. *As-built Exhibits.* Within 90 days of completion of construction of the facilities authorized by the license, 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 the previously approved exhibits reflect the as-built facilities and no revisions are necessary, the licensee must file a letter stating the approved exhibits reflect the as-built project facilities.

Following the upgrade of each generator unit at the Parr Development as authorized in Article 405, the licensee must file revised exhibits A, F, and G within 90 days of the new generator unit's operational commencement start date. For purposes of this article, the first use of a unit following an upgrade will be considered the operational commencement start date. The filing must include photographs of the nameplates for each turbine unit and generator.

Article 301. *Start of Construction.* The licensee must commence construction of generator upgrades at the Parr Development consistent with the following schedule:

- (a) Commence upgrade of first unit within 2 years of license issuance;
- (b) Commence upgrade of second unit within 5 years of license issuance;
- (c) Commence upgrade of third unit within 6 years of license issuance;
- (d) Commence upgrade of fourth unit within 7 years of license issuance;
- (e) Commence upgrade of fifth unit within 8 years of license issuance;
- (f) Commence upgrade of sixth unit within 9 years of license issuance.

The licensee must complete construction of the generator upgrades within 10 years from the issuance date of the license.

Article 302. Project Modification Resulting from Environmental Requirements. If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission’s Division of Dam Safety and Inspections (D2SI)–Atlanta Regional Engineer. Consultation must allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 401. Commission Approval, Reporting, and Filing of Amendments.

(a) Requirements to File Plans for Commission Approval

The South Carolina Department of Health and Environmental Control’s (South Carolina DHEC) section 401 water quality certification (Appendix A), the U.S. Forest Service’s (Forest Service) section 4(e) conditions (Appendix B), and the National Marine Fisheries Service’s (NMFS) section 18 prescription (Appendix C) either require the licensee to: (a) prepare plans in consultation with other entities or for approval by the conditioning agencies, and implement specific measures without prior Commission approval; or (b) do not specify when the plan(s) would be filed with the Commission for approval. The following plans must be submitted to the Commission for approval by the deadline specified:

<b>Condition</b>	<b>Plan Name</b>	<b>Commission Due Date</b>
South Carolina DHEC WQC Condition No. 1.a	Flow Fluctuations Downstream of Parr Shoals Dam Adaptive Management Plan - revised	Within 90 days of the issuance date of this license
South Carolina DHEC WQC Condition No. 1.b	Minimum Flows Downstream of Parr Shoals Dam Adaptive Management Plan - revised	Within 90 days of the issuance date of this license
South Carolina DHEC WQC Condition No. 1.c	Enhancements to the West Channel Downstream of Parr Shoals Dam Adaptive Management Plan - revised	Within 90 days of the issuance date of this license.

<b>Condition</b>	<b>Plan Name</b>	<b>Commission Due Date</b>
Forest Service 4(e) Condition No. 11	Hazardous Substances and Spill Prevention and Cleanup Plan	Within 14 days of Forest Service approval of any request to store hazardous substances on Forest Service land
Forest Service 4(e) Condition No. 18	Aquatic Invasive Species Management and Monitoring Plan	Within 1 year of the issuance date of this license
Forest Service 4(e) Condition No. 18	Vegetation and Invasive Weed Management Plan	Within 1 year of the issuance date of this license
Forest Service 4(e) Condition No. 21	Fire and Fuels Management Plan	Within 1 year of the issuance date of this license
NMFS Section 18 Prescription No. 6.3.1.1	American Shad and Blueback Herring Fish Passage Feasibility Assessment	Within 14 days of NMFS approval of a final American Shad and Blueback Herring Fish Passage Feasibility Assessment
NMFS Section 18 Prescription No. 6.3.1.7	American Shad and Blueback Herring Upstream and Downstream Fishway Design Plans	Within 14 days of NMFS approval of final American Shad and Blueback Herring Upstream and Downstream Fishway Design Plans
NMFS Section 18 Prescription No. 6.3.1.7	American Shad and Blueback Herring Upstream and Downstream Fishway Construction Plans	Within 14 days of NMFS approval of final American Shad and Blueback Herring Upstream and Downstream Fishway Construction Plans
NMFS Section 18 Prescription No. 6.3.1.5	American Shad and Blueback Herring Upstream and Downstream Fishway Operation and Maintenance Plans	Within 14 days of NMFS approval of final American Shad and Blueback Herring Upstream and Downstream Fishway Operation and Maintenance Plans
NMFS Section 18 Prescription No. 6.3.1.7	American Shad and Blueback Herring Upstream and Downstream Fishway Evaluation Plans	Within 14 days of NMFS approval of final American Shad and Blueback Herring Upstream and Downstream Fishway Evaluation Plans

<b>Condition</b>	<b>Plan Name</b>	<b>Commission Due Date</b>
NMFS Section 18 Prescription No. 6.3.1.8	American Shad and Blueback Herring Upstream and Downstream Fishway Effectiveness Monitoring Plans	Within 14 days of NMFS approval of final American Shad and Blueback Herring Upstream and Downstream Fishway Effectiveness Monitoring Plans

With each plan filed with the Commission, the licensee must include documentation that it developed the plan in consultation with South Carolina DHEC, the Forest Service, NMFS, and other consulted agencies stipulated by the mandatory conditions, and has received approval from South Carolina DHEC, Forest Service, or NMFS, as appropriate. For each plan filed, the licensee must provide copies of any comments received, as well as its response to each comment. The Commission reserves the right to make changes to any plan filed. Upon Commission approval, the plan becomes a requirement of the license, and the licensee must implement the plan, including any changes required by the Commission. Any changes in the above schedule or plan(s) require approval by the Commission before implementing the proposed change.

(b) Requirement to Notify Commission of Planned and Unplanned Deviations from License Requirements, and Fulfilling License Requirements

South Carolina DHEC's certification condition 1.d in Appendix A allows the licensee to adjust or extend the turbine venting window beyond June 15 through August 31. NMFS's fishway prescription condition 6.3.1.3 in Appendix C allows NMFS to defer the timing of construction and/or operation of fishways. The Commission must be notified as soon as possible in writing of the need to adjust the schedules mentioned above, but, in the case of an emergency, no later than 10 days after each such modification. Any modification(s) to the (a) seasonal turbine venting period and (b) timing of construction and/or operation of fishways must be based on consultation with NMFS, the U.S. Fish and Wildlife Service, the South Carolina Department of Natural Resources, and South Carolina DHEC. Temporary modifications must not exceed 30 days. Any modification exceeding 30 days requires prior Commission approval.

(c) Requirement to File Amendment Applications

Certain South Carolina DHEC section 401 water quality certification conditions in Appendix A, Forest Service 4(e) conditions in Appendix B, and NMFS fishway prescription conditions in Appendix C contemplate unspecified long-term changes to project operations or facilities for the purpose of addressing environmental effects (e.g.,

water quality certification conditions 1.a, 1.b, and 1.c, which all require a 5-year report with recommendations following the end of an adaptive management period; Forest Service 4(e) condition 18-modifications to the Aquatic Invasive Species Management and Monitoring Plan and Vegetation and Invasive Weed Management Plan; and Forest Service 4(e) condition 19-future changes to address special status species on Forest Service land; NMFS fishway prescription condition 6.3.1.4, which allows modifications to the American shad and blueback herring upstream and downstream fishway operating schedules). These changes may not be implemented without prior Commission approval, granted after the filing of an application to amend the license. In any amendment request, the licensee must identify related project requirements and request corresponding amendments or extensions of time as needed to maintain consistency among requirements.

#### Article 402. Project Operation.

##### Fairfield Pumped Storage Development

The licensee must operate the Fairfield Pumped Storage Development within the following minimum and maximum reservoir elevations for Monticello Reservoir: (1) a Normal Minimum Elevation of 419.8 feet North American Vertical Datum of 1988 (NAVD88); and (2) a full pool elevation of 424.3 feet NAVD88.

##### Parr Shoals Development

The licensee must operate the Parr Shoals Development within the following minimum and maximum reservoir elevations for Parr Reservoir: (1) a Normal Minimum Elevation of 255.3 feet NAVD88; and (2) a full pool elevation of 265.3 feet NAVD88. In addition, the licensee must minimize flow fluctuations downstream of Parr Shoals dam, and release below Parr Shoals dam the minimum flows as required by South Carolina Department of Health and Environmental Quality's (South Carolina DHEC) certification condition 1.a, described in Appendix A-2 of the Settlement Agreement, and certification condition 1.b., as described in section A-2 of the Settlement Agreement filed June 28, 2018.

The reservoir elevations and flows specified above may be temporarily modified as follows:

##### Planned Deviations

Reservoir elevations and flow releases may be temporarily modified for short periods, of up to 3 weeks, after mutual agreement among the licensee and the U.S. Fish and Wildlife Service, South Carolina Department of Natural Resources, and South Carolina DHEC (collectively, resource agencies). After concurrence from the resource agencies, the licensee must notify the Commission within 14 days and file a report with

the Secretary of the Commission as soon as possible, but no later than 30 days after the onset of the planned deviation. Each report must include: (1) the reasons for the deviation and how project operations were modified; (2) the duration and magnitude of the deviation; (3) any observed or reported environmental effects; and (4) documentation of consultation with the resource agencies. For planned deviations exceeding 3 weeks, the licensee must file an application for a temporary amendment of the operational requirements of this license, and receive Commission approval prior to implementation.

### Unplanned Deviations

Reservoir elevations and flow releases may be temporarily modified if required by operating emergencies beyond the control of the licensee (*i.e.*, unplanned deviations). For any unplanned deviation from reservoir elevations or minimum flow requirements that lasts longer than 3 hours *or* results in visible environmental effects such as a fish kill, the licensee must notify the resource agencies within 24 hours, and the Commission within 14 days, and file a report as soon as possible, but no later than 30 days after each such incident. The report must include: (1) the cause of the deviation; (2) the duration and magnitude of the deviation; (3) any pertinent operational and/or monitoring data; (4) a timeline of the incident and the licensee's response; (5) any comments or correspondence received from the resource agencies, or confirmation that no comments were received from the resource agencies; (6) documentation of any observed or reported environmental effects; and (7) a description of measures implemented to prevent similar deviations in the future.

Article 403. Flood Flow Operation. The licensee must operate the Monticello Reservoir and Parr Reservoir in a manner such that: (1) when flows exceed the hydraulic capacity of the turbines at the Parr Development, the licensee must incrementally lower the crest gates at Parr Shoals Dam until 40,000 cubic feet per second (cfs) passes at the dam, at which time all gates must be lowered to pass all flows entering the project; and (2) releases from the Fairfield Development must be completely suspended until flows greater than 40,000 cfs recede.

Article 404. Operation Compliance Monitoring. Within one year of the date of issuance of the license, the licensee must file with the Commission for approval, a plan that describes how the licensee will monitor and report compliance with the operational requirements of the license. The plan, at a minimum, must include:

- (1) a detailed description of how the licensee will monitor compliance with the operational requirements of Article 402, the flood flow requirements of Article 403, the flow fluctuation requirements required by the South Carolina Department of Health and Environmental Quality's (South Carolina DHEC) certification condition 1.a, and the minimum flows required by the South Carolina DHEC certification condition 1.b;

- (2) a description of the gages or measuring devices, or techniques that will be used to monitor compliance;
- (3) a description of the specific locations of all gages or other measuring devices;
- (4) a description of the procedures for maintaining and calibrating monitoring equipment;
- (5) a provision to maintain a log of project operation;
- (6) the protocols or methods to be used for reporting the monitoring data to the Commission;
- (7) a provision to notify the Commission, National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (FWS), South Carolina Department of Natural Resources (South Carolina DNR), and South Carolina DHEC, as soon as possible, but no later than 30 days after each such incident, of any deviations with the operational license requirements; and
- (8) an implementation schedule.

The licensee must prepare the plan after consultation with the NMFS, FWS, South Carolina DNR, and South Carolina DHEC. The licensee must 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 must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 405. *Parr Shoals Development Generator Upgrade Implementation.* The Implementation Plan for Upgrade/Rewind of Generators at Parr Shoals Development, filed on June 28, 2018, as Appendix A-12 of the Settlement Agreement is approved and made part of this license and may not be amended without prior Commission approval.

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

Article 406. Erosion and Sediment Control Management. The Erosion and Sediment Control Management Plan required by Condition 20 of Appendix B must include the provisions of the Erosion Monitoring Plan filed June 28, 2018, as Appendix A-15 of the Settlement Agreement and the following additional provisions:

- (1) a provision for monitoring erosion at the canoe portage downstream of Parr Shoals Dam as part of annual monitoring of Parr Reservoir; and
- (2) a provision for monitoring the stability of repaired areas twice-yearly on Monticello Reservoir and annually on Parr Reservoir.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 407. Monticello Reservoir Fisheries Habitat Enhancement. The Monticello Reservoir Fisheries Habitat Enhancement Plan, filed on June 28, 2018, as Appendix A-4 of the Settlement Agreement, is approved and made part of this license and may not be amended without prior Commission approval. Upon license issuance, the licensee must implement the Monticello Reservoir Fisheries Habitat Enhancement Plan.

Section 5.0 of the approved plan contemplates installation of additional spawning beds based on inspection of the first 120 spawning beds that would be installed as a provision of the approved plan. At least 90 days before installing any additional spawning beds, the licensee must file with the Commission a plan for the installing the proposed beds. The additional spawning beds may not be installed without prior Commission approval.

Article 408. American Eel Abundance Monitoring. Within 180 days of license issuance, the licensee must file with the Commission for approval, an updated American Eel Abundance Monitoring Plan that includes a description of the final monitoring methods. The plan must be based on, and include the provisions of, the American Eel Abundance Monitoring Plan, filed on June 28, 2018, as Appendix A-5 of the Settlement Agreement.

The updated American Eel Abundance Monitoring Plan must be developed after consultation with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (FWS), South Carolina Department of Natural Resources (South Carolina DNR), and South Carolina Department of Health and Environmental Control (South Carolina DHEC). The licensee must include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the agencies above, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the

agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Section 4.0 of the American Eel Abundance Monitoring Plan, filed on June 28, 2018, contemplates potential changes to the American eel monitoring schedule provided in table 4-1 of the plan. Updates to the American Eel Abundance Monitoring Plan must be developed after consultation with the NMFS, FWS, South Carolina DNR, and South Carolina DHEC. The licensee must include with the updated plan documentation of consultation, copies of recommendations on the updated plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated in the updated plan. The licensee must allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the updated plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons based on project-specific reasons. The Commission reserves the right to require changes to the American Eel Abundance Monitoring Plan based on the updated plan.

Article 409. Freshwater Mussel Monitoring. Within 180 days of license issuance, the licensee must file, with the Commission for approval, an updated Freshwater Mussel Monitoring Plan that includes a final Mussel Monitoring Study Plan; and excludes all provisions for monitoring freshwater mussels in Monticello Reservoir. The plan must be based on, and include the provisions of, the Freshwater Mussel Monitoring Plan, filed on June 28, 2018, as Appendix A-6 of the Settlement Agreement.

The updated Freshwater Mussel Monitoring Plan must be developed after consultation with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (FWS), South Carolina Department of Natural Resources (South Carolina DNR), and South Carolina Department of Health and Environmental Control (South Carolina DHEC). The licensee must include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the agencies above, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan must not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Section 4.0 of the Freshwater Mussel Monitoring Plan filed on June 28, 2018 contemplates potential changes to the sampling frequency of the freshwater mussel monitoring. Updates to the Freshwater Mussel Monitoring Plan must be developed after consultation with the NMFS, FWS, South Carolina DNR, and South Carolina DHEC. The licensee must include with the updated plan documentation of consultation, copies of recommendations on the updated plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated in the updated plan. The licensee must allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the updated plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons based on project-specific reasons. The Commission reserves the right to require changes to the Freshwater Mussel Monitoring Plan based on the updated plan.

Article 410. *Fairfield Development Tailrace Lighting.* To minimize the potential for entrainment during pump-back operation of the Fairfield Development, the licensee must turn off the tailrace lighting at night during pump-back operation. For purposes of administering compliance with this article, "night" means one-half hour after sunset to one-half hour before sunrise.

Article 411. *Initiating Fishway Operations.* To allow the Commission to effectively administer the terms of National Marine Fisheries Service (NMFS) section 18 fishway prescription in Appendix C for Parr Shoals Dam, the licensee must not initiate operation of any newly constructed fishways during the migration season of American shad and blueback herring at the Parr Development until fishway evaluations conducted outside the migration season indicate proper operation and design of the fishways. For purposes of administering compliance with this article, the upstream and downstream migration seasons for American shad and blueback herring must be consistent with the migration seasons included in NMFS's prescription 6.3.1.4 (Appendix C).

Article 412. *Downstream Fishway Operating Schedule.* In accordance with National Marine Fisheries Service's prescription 6.3.1.4 (Appendix C), the licensee must maintain and operate any constructed downstream fishways during the late summer to fall downstream migration period for American shad and blueback herring. In addition to the requirements in prescription 6.3.1.4, the licensee must identify the start and stop calendar dates of the late summer to fall downstream migration period in consultation with NMFS

and file the dates with copies of comments and recommendations from NMFS no later than July 31 of each license year.

Article 413. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretaries of the Interior or Commerce pursuant to section 18 of the Federal Power Act.

Article 414. *Time of Year Restrictions on Timber Harvesting.* The licensee must limit timber harvesting within the project boundary to November 1 to March 31 for the protection of northern long-eared bat (NLEB). If harvesting timber on project lands is necessary during a period outside of the November 1 to March 31 NLEB inactive season, the licensee must first engage a qualified biologist to survey the tract proposed for harvesting for the presence of NLEB individuals, maternity roost trees, or hibernacula during the recommended survey season of May 15 to August 15, and species survey documentation must be forwarded to U.S. Fish and Wildlife Service and South Carolina Department of Natural Resources and filed with the Commission. If NLEB presence is documented by the surveys, then the licensee must refrain from harvesting that tract outside of the November 1 to March 31 timeframe. If NLEB is not documented, the licensee is permitted to harvest the tract outside of the November 1 to March 31 period for the year in which the survey was conducted only.

Article 415. *Vegetation and Invasive Plant Management.* The vegetation and invasive plant management plan required by Forest Service 4(e) Condition 18 in Appendix B of this license must be modified to include additional provisions for the monitoring and control of invasive plants at all project recreation sites, including: Scenic Overlook, Highway 215, Highway 99 East, Highway 99 West, and Recreation Lake Access Area on Monticello Reservoir, and Cannon's Creek, Heller's Creek, Highway 34, Enoree River Bridge, and the Parr Shoals Dam Canoe Portage on Parr Reservoir.

For each recreation site, the vegetation and invasive plant management plan must, at a minimum, include: (1) guidelines for preventing establishment of invasive plants; (2) methods to ensure early detection and treatment of invasive plants; (3) guidelines for treatment of invasive plant populations; (4) a list of target invasive plants, as defined by the Regional Forester Southern Region, Southern Research Station and South Carolina Exotic Plant Pest Council, or identified as Forest Service species of concern; (5) a description of revegetation strategies; and (6) provisions for monitoring and reporting.

Article 416. *Recreation Management.* Within 90 days of license issuance, the licensee must file with the Commission for approval, a revised Recreation Management Plan (RMP) for the Parr Project.

In addition to the provisions of the RMP filed June 28, 2018, as Appendix A-1 of

the Settlement Agreement, the revised RMP must include: (1) the provisions required by Forest Service 4(e) Condition 23 in Appendix B of this license; (2) a provision to operate and maintain the following existing recreation facilities: Scenic Overlook, Highway 215, Highway 99 West, and Recreation Lake Access Area on Monticello Reservoir, and Cannon's Creek and Heller's Creek on Parr Reservoir; (3) a provision to construct, operate, and maintain the Highway 99 East Recreation Site on Monticello Reservoir, and the Parr Shoals Dam canoe portage, Highway 34 Recreation Site, and Enoree River Bridge Recreation Site on Parr Reservoir; and (4) a provision for the licensee to file a report describing whether an update to the RMP is needed following each recreation assessment according to the required schedule (approximately 12 years following license issuance, then approximately 10 and 20 years after the conclusion of the first recreation assessment) and including an evaluation of the adequacy of existing recreation facilities to provide public access, whether changes are warranted to address existing and projected future recreation needs, and a description of the methods used to determine existing and future needs.

If an update to the approved RMP is needed, the licensee must either provide a plan and schedule for filing an update for Commission approval or incorporate the updated plan into the report for Commission approval (red-line documents are preferred so that plan modifications can be easily identified). The updated RMP must also specify that the report stipulated in item 4 be developed after consultation with South Carolina Department of Natural Resources and the Forest Service. The licensee must include with the report documentation of consultation, copies of recommendations on the completed report after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated in the report. The licensee must allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the report/update with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons based on project-specific reasons.

The Commission reserves the right to require changes to the updated RMP. Land-disturbing activities must not begin until the licensee is notified by the Commission that the updated RMP is approved. Upon Commission approval, the licensee must implement the updated RMP, including any changes required by the Commission.

Article 417. Monticello Shoreline Management. Within 60 days of license issuance, the licensee must file with the Commission for approval an updated Monticello Shoreline Management Plan that in addition to the provisions included in the Monticello Shoreline Management Plan filed June 28, 2018, as Appendix A-14 of the Settlement Agreement, must also include a provision for a twice-yearly (June and December) visual monitoring of the shoreline for compliance with the plan.

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

Article 418. *Parr Shoreline Management.* The Parr Shoreline Management Plan filed on June 28, 2018, as Appendix A-13 of the Settlement Agreement is approved and made part of this license and may not be amended without prior Commission approval.

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

Article 419. *Programmatic Agreement and Historic Properties Management Plan.* The licensee must implement the “Programmatic Agreement Between the Federal Energy Regulatory Commission and the South Carolina Historic Preservation Officer for Managing Historic Properties that May be Affected by Issuance of a License to Dominion Energy for the Continued Operation and Maintenance of the Parr Hydroelectric Project located in Fairfield and Newberry Counties, (FERC No. 1894-211),” executed on April 22, 2020, by the South Carolina State Historic Preservation Officer, and including but not limited to the approved Historic Properties Management Plan (HPMP) for the project.

The Commission reserves the authority to require changes to the HPMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the HPMP, the licensee must obtain approval from the Commission and the South Carolina SHPO before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the project’s area of potential effects.

Article 420. *Use and Occupancy.* (a) In accordance with the provisions of this article, the licensee must have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee must also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee must take any lawful action necessary

to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee must require multiple use and occupancy of facilities for access to project lands or waters. The licensee must also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee must: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee must file with the Commission a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter with the Commission, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Commission's authorized representative, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee must consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee must determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E; or, if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed must not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee must take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and

(iii) the grantee must not unduly restrict public access to project lands and waters.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project must be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article must not apply to any part of the public lands and reservations of the United States included within the project boundary.

(G) The licensee must serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(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 FPA, 16 U.S.C. § 825*l*, and section 385.713 of the Commission's regulations, 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 license or of any other date specified in this order. The licensee's failure to file a request for rehearing constitutes acceptance of this order.

for  
Terry L. Turpin  
Director  
Office of Energy Projects

**Form L-5**  
(October, 1975)

**FEDERAL ENERGY REGULATORY COMMISSION  
TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED  
MAJOR PROJECT AFFECTING NAVIGABLE WATERS  
AND LANDS OF THE UNITED STATES**

**Article 1.** The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

**Article 2.** No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

**Article 3.** The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

**Article 4.** The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the

Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

**Article 5.** The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

**Article 6.** In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project

property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

**Article 7.** The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

**Article 8.** The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

**Article 9.** The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

**Article 10.** The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such

conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

**Article 11.** Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

**Article 12.** The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

**Article 13.** On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that

the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

**Article 14.** In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

**Article 15.** The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

**Article 16.** Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

**Article 17.** The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during

the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

**Article 18.** So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

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

**Article 20.** The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

**Article 21.** Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

**Article 22.** Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools,

as may be required to complete and maintain such navigation facilities.

**Article 23.** The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

**Article 24.** The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

**Article 25.** The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

**Article 26.** Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

**Article 27.** The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

**Article 28.** The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the

United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

**Article 29.** The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

**Article 30.** The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

**Article 31.** In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

**Article 32.** The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

**Article 33.** The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are

designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

**Article 34.** The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

**Article 35.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

**Article 36.** The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

**Article 37.** The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

**APPENDIX A**

**SOUTH CAROLINA DEPARTMENT OF  
HEALTH AND ENVIRONMENTAL CONTROL  
CLEAN WATER ACT SECTION 401 CERTIFICATION CONDITIONS**

**Parr Hydroelectric Project  
FERC Project No. 1894  
Issued May 7, 2020**

1. Dominion Energy South Carolina, Inc. must operate the Parr Hydroelectric Project (FERC 1894) in accordance with the following plans from the Comprehensive Relicensing Settlement Agreement (CRSA), including adaptive management provisions:
  - a. Flow Fluctuations Downstream of Parr Shoals Dam Adaptive Management Plan (CRSA Appendix A-2)
  - b. Minimum Flows Downstream of Parr Shoals Dam Adaptive Management Plan (CRSA Appendix A-3)
  - c. Enhancements to the West Channel Downstream of Parr Shoals Dam Adaptive Management Plan (CRSA Appendix A-10)
  - d. Parr Shoals Dam Turbine Venting Plan (CRSA Appendix A-11)
  - e. Erosion Monitoring Plan (CRSA Appendix A-15)
2. Dominion Energy South Carolina, Inc. must take all necessary measures during Parr Hydroelectric Project operation and maintenance to prevent fuel, oil, tar, trash, debris and other pollutants from entering the adjacent waters or wetlands.

**APPENDIX B****U.S.D.A. FOREST SERVICE STANDARD SECTION 4(e) CONDITIONS  
filed on August 29, 2017****PART I: STANDARD ADMINISTRATIVE CONDITIONS****Condition No. 1 – Revision of Forest Service Conditions**

Forest Service reserves the right, after notice and opportunity for comment, to require changes in the Project and its operation through revision of the Section 4(e) conditions to accomplish protection and utilization of National Forest System lands and resources. Forest Service also reserves the right to modify these conditions, if necessary, to respond to any significant changes in the assessed effects of the Project on national forest resources that warrant a revision of these conditions, for example, a Final Biological Opinion issued for this Project by the National Marine Fisheries Service or United States Fish and Wildlife Service; or any Certification issued for this Project by the State Water Resources Control Board.

**Condition No. 2 - Surrender of License or Transfer of Ownership**

Prior to any surrender of this license, Licensee shall provide assurance acceptable to Forest Service that Licensee shall restore any project area directly affecting National Forest System lands to a condition satisfactory to Forest Service upon or after surrender of the license, as appropriate. To the extent restoration is required, Licensee shall prepare a restoration plan for Forest Service approval, which shall identify the measures to be taken to restore such National Forest System lands and shall include adequate financial mechanisms to ensure performance of the restoration measures.

In the event of any transfer of the license or sale of the project, Licensee shall assure that, in a manner satisfactory to Forest Service Licensee or transferee will provide for the costs of surrender and restoration. If deemed necessary by FS to assist it in evaluating Licensee's proposal, Licensee shall conduct an analysis, using experts approved by Forest Service, to estimate the potential costs associated with surrender and restoration of any project area directly affecting National Forest System lands to Forest Service specifications. In addition, Forest Service may require Licensee to pay for an independent audit of the transferee to assist Forest Service in determining whether the transferee has the financial ability to fund the surrender and restoration work specified in the analysis.

**Condition No. 3 - Requirement to Obtain a Forest Service Special Use Authorization for Use of National Forest System Lands****Requirement to Obtain a Forest Service Special Use Authorization Based on the Energy Policy Act of 1992**

Licensee shall obtain a special use authorization from Forest Service for the occupancy and use of lands included in the licensed project boundary. Licensee shall obtain the executed

authorization prior to beginning any ground disturbing activities on National Forest System lands to be covered by the special use authorization and shall file that special use authorization with the Commission. Licensee shall be responsible for the costs of collecting all information directly related to the evaluation of the effects of the proposed occupancy and use that Forest Service needs in order to make a decision concerning issuance of the special use authorization.

**Requirement to Obtain a Forest Service Special Use Authorization Based on Issuance of Previous Special Use Authorization(s)**

Licensee shall obtain a special use authorization from Forest Service for the occupancy and use of lands previously covered by a special use authorization in any previous license. Licensee shall obtain the executed authorization within 6 months of license issuance and prior to beginning any ground disturbing activities on National Forest System lands to be covered by the special use authorization and shall file that special use authorization with the Commission.

Licensee shall be responsible for the costs of collecting all information directly related to the evaluation of the effects of the proposed occupancy and use that Forest Service needs in order to make a decision concerning issuance of a special use authorization.

**Requirement to Obtain a Forest Service Special Use Authorization for Projects That Involve the Use of Additional National Forest System Lands That do not have a Special Use Authorization**

Licensee shall obtain a special use authorization from Forest Service for the occupancy and use of National Forest System lands that are (1) not part of the existing license but are added to the FERC boundary by the Commission and (2) not previously covered by a special use authorization. Licensee shall obtain the executed authorization within 6 months of license issuance and prior to beginning any ground disturbing activities on National Forest System lands to be covered by the special use authorization and shall file that special use authorization with the Commission. Licensee shall be responsible for the costs of collecting all information directly related to the evaluation of the effects of the proposed occupancy and use that Forest Service needs in order to make a decision concerning issuance of a special use authorization.

**Condition No. 4 - Requirement to Obtain a Short-Term Forest Service Special Use Authorization**

If, during the term of the License, Licensee proposes to perform any project construction work, the Licensee shall obtain a short-term special use authorization prior to beginning any ground disturbing activities on National Forest System land. Licensee shall be responsible for the costs of collecting and analyzing all information directly related to the evaluation of the effects of the proposed project that Forest Service needs in order to make a decision concerning issuance of a short-term special use authorization. Licensee may commence ground disturbing activities authorized by the License and short-term special use authorization no sooner than 60 days following the date Licensee files the Forest Service short-term special use authorization with the Commission, unless the Commission prescribes a different commencement schedule. In the event there is a conflict between any provisions of the License and Forest Service special use authorization, the special use authorization shall prevail to the extent that Forest Service, in

consultation with the Commission, deems the terms of the special use authorization necessary to protect and utilize National Forest System resources.

The short-term special use permit shall address but not be limited to:

- Safety.
- Use and storage of equipment.
- Properly licensed construction personnel.
- Inspections.

Before any construction occurs on National Forest System lands, Licensee shall obtain prior written approval of Forest Service for all final design plans for Project components, which Forest Service deems as affecting or potentially affecting National Forest System resources.

### **Condition No. 5 - Compliance with Regulations**

Licensee shall comply with the regulations of the Department of Agriculture for activities on National Forest System lands, and all applicable Federal, State, county, and municipal laws, ordinances, or regulations in regards to the area or operations on or directly affecting National Forest System lands, to the extent those laws, ordinances or regulations are not preempted by federal law.

### **Condition No. 6 - Protection of United States Property**

Licensee, including any agents or employees of Licensee acting with the scope of their employment, shall exercise diligence in protecting from damage the land, property, and interests of the United States from damage arising from Licensee's construction, maintenance, or operation of the project works or the works appurtenant or accessory thereto under the license. Licensee's liability for fire and other damages to National Forest System lands shall be determined in accordance with the Federal Power Act and standard Form L-1 Articles 22 and 24 or correct current form.

As part of the occupancy and use of the project area, Licensee has a continuing responsibility to reasonably identify and report all known or observed hazardous conditions on or directly affecting National Forest System lands that would affect the improvements, resources, or pose a risk of injury to individuals. Licensee will abate those conditions, except those caused by third parties or not related to the occupancy and use authorized by the License. Any non-emergency actions to abate such hazards on National Forest System lands shall be performed after consultation with Forest Service. In emergency situations, Licensee shall notify Forest Service of its actions as soon as possible, but not more than 48 hours, after such actions have been taken.

Whether or not Forest Service is notified or provides consultation, Licensee shall remain solely responsible for all abatement measures performed. Other hazards should be reported to the appropriate agency as soon as possible.

Licensee shall maintain all its improvements and premises on National Forest System lands to standards of repair, orderliness, neatness, sanitation, and safety acceptable to Forest Service. Licensee shall comply with all applicable Federal, State, and local laws and regulations, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resources Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, and maintenance of any facility, improvement, or equipment. Disposal of all materials will be at an approved existing location, except as otherwise agreed by Forest Service.

### **Condition No. 7 - Existing Claims**

License shall be subject to all valid claims and existing rights of third parties. The United States is not liable to Licensee for the exercise of any such right or claim.

### **Condition No. 8 – Indemnification**

Licensee shall indemnify, defend, and hold the United States harmless for:

- any violations incurred under any laws and regulations applicable to, or
- judgments, claims, penalties, fees, or demands assessed against the United States caused by, or
- costs, damages, and expenses incurred by the United States caused by, or
- the releases or threatened release of any solid waste, hazardous substances, pollutant, contaminant, or oil in any form in the environment related to the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license.

Licensee's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property caused by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. Upon surrender, transfer, or termination of the license, Licensee's obligation to indemnify and hold harmless the United States shall survive for all valid claims for actions that occurred prior to such surrender, transfer or termination.

### **Condition No. 9 – Access Within the License Area**

The United States shall have unrestricted use of any part of the licensed area on National Forest System lands for any purpose, including permitting uses by third parties or members of the public, provided such use does not interfere with the rights and privileges authorized for the license.

## **Condition No. 10 – Use of National Forest System Roads**

If the Project requires use of roads on National Forest System lands, Licensee shall obtain suitable authorization for all project access roads and National Forest System roads needed for Project access. The authorization shall require road maintenance and cost sharing in reconstruction commensurate with Licensee's use and project-related use. The authorization shall specify road maintenance and management standards that provide for traffic safety, minimize erosion, and minimize damage to natural resources and that are acceptable to Forest Service, as appropriate.

Licensee shall pay Forest Service for its share of maintenance cost or perform maintenance or other agreed to services, as determined by Forest Service, for all use of roads related to project operations, project-related public recreation, or related activities. The maintenance obligation of Licensee shall be proportionate to total use and commensurate with its use. Any maintenance to be performed by Licensee shall be authorized by and shall be performed in accordance with an approved maintenance plan and applicable Best Management Practices (BMPs). In the event a road requires maintenance, restoration, or reconstruction work to accommodate Licensee's needs, Licensee shall perform such work at its own expense after securing Forest Service road maintenance, restoration, or reconstruction standards and authorization.

Licensee shall complete a condition survey and a proposed maintenance plan subject to Forest Service, review and approval as appropriate once each year. The plan may take the format of a road maintenance agreement provided all the above conditions are met as well as the conditions set forth in the proposed agreement.

In addition, all National Forest System roads used as Project Access roads (PAR) and Right-of-Way access roads (ROW) shall have:

- Current condition survey.
- Map(s) at a scale to allow identification of specific routes or segments.
- FS assigned road numbers are used for reference on the maps, tables, and in the field.
- GIS compatible files of GPS alignments of all roads used for Project access are provided to Forest Service.
- Adequate signage is installed and maintained by Licensee at each road or route, identifying the road by Forest Service road number.

Licensee shall confine all vehicles being used for project purposes, including but not limited to administrative and transportation vehicles and construction and inspection equipment, to roads or specifically designed access routes, as identified in the authorization described above. Forest Service reserves the right to close any and all such routes where damage is occurring to the soil or vegetation or to require reconstruction/construction by Licensee to the extent needed to accommodate Licensee's use. Forest Service, agrees to provide notice to Licensee prior to road closures, except in an emergency, in which case notice will be provided as soon as practicable.

Licensee shall maintain suitable crossings as required by FS, for all roads and trails that intersect the right-of-way occupied by linear Project facilities (powerline, penstock, ditch, and pipeline).

## **Condition No. 11 - Hazardous Substances Plan**

Hazardous substances may not be stored on National Forest System lands without prior approval of Forest Service, Licensee shall submit a spill prevention and cleanup plan for approval by Forest Service, as part of any request to store hazardous substances. The plan shall show evidence of consultation with Forest Service. The plan shall be filed with the Commission.

At a minimum, the plan must: (1) outline the Licensee's procedures for reporting and responding to releases of hazardous substances, including names and phone numbers of all emergency response personnel and their assigned responsibilities; (2) maintain in the project area, a cache of spill cleanup equipment suitable to contain any spill from the project; (3) include a schedule to periodically inform Forest Service, of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the project area; and (4) include a requirement to inform Forest Service immediately of the magnitude, nature, time, date, location, and action taken for any spill. Procedures for chemicals are outlined in the Department of Transportation's Emergency Response Guide Book (Orange book) and in the MSDS/SDS for each chemical.

For DRY spills:

- Immediately cover with plastic or a tarpaulin to prevent the chemical from becoming airborne
- Sweep the material together, rolling the tarp back slowly
- Shovel the material into doubled plastic bags
- Identify product name for the chemical(s) spilled and apply this information to the outside of the containment bags, along with the time, date, location and amount of spill.

For LIQUID spills:

- Use absorbent material, such as kitty litter or sawdust, to soak up the spill. Begin spreading the absorbent material around the edge of the spill and then work toward the center. Use only enough material to absorb the spill
- Shovel the absorbent material and chemical, along with any contaminated soil, into doubled plastic bags
- Identify product name for the chemical(s) spilled and apply this information to the outside of the containment bags, along with the time, date, location and amount of spill.

The plan shall include a monitoring plan that details corrective measures that will be taken if spills occur. The plan shall include a requirement for a weekly written report including maps, documenting the results of the monitoring to be sent to the Forest Service-Francis Marion and Sumter National Forest-MAZMAT Coordinator.

## **Condition No. 12 - Pesticide-Use Restrictions on National Forest System Lands**

Pesticides may not be used on National Forest System lands or in areas affecting National Forest System lands to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, non-native fish, etc., without the prior written approval of Forest Service. Any request by Licensee to use pesticides shall be accompanied by the following:

A determination as to whether pesticide applications are essential for use on National Forest System lands;

- Specific locations of use;
- Specific pesticides proposed for use;
- Application rates;
- Dose and exposure rates; and
- Safety risk and timeframes for application.

Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the report was submitted. In such an instance, an emergency request and approval may be made.

On National Forest System lands, Licensee shall only use those materials registered by the U.S. Environmental Protection Agency and consistent with those applied by Forest Service and approved through Forest Service review for the specific purpose planned. Licensee must strictly follow label instructions in the preparation and application of pesticides and disposal of excess materials and containers. Licensee may also submit Pesticide Use Proposal(s) with accompanying risk assessment and other Forest Service required documents to use pesticides on a regular basis. Submission of this plan will not relieve Licensee of the responsibility of annual notification and review.

## **Condition No. 13 – Consultation**

Licensee shall annually consult with Forest Service. The date of the consultation meeting will be mutually agreed to by Licensee and Forest Service but in general should be held by April 15. At least 30 days in advance of the meeting, Licensee shall notify other interested stakeholders, confirming the meeting location, time and agenda. At the same time, Licensee shall also provide notice to South Carolina Department of Natural Resources and United States Fish and Wildlife Service, who may choose to participate in the meeting. Licensee shall attempt to coordinate the meeting so interested agencies and other stakeholders may attend.

Licensee shall make the following information available to Forest Service and other meeting participants at least 30 days prior to the meeting:

- An operations plan for the year in which the meeting occurs, including planned outages.
- A description of planned maintenance projects for the year in which the meeting occurs.
- Any records of non-compliance with the License.

- The hydrology record for the previous year, if available, including any variances.
- Results of any monitoring conducted the previous year.
- Safety reports, including geologic and seismic reports.
- A document that tracks the status of the Section 4(e) Conditions that require action in the year in which the meeting occurs.

Consultation shall include, but not be limited to:

- A status report regarding implementation of license conditions.
- Results of any monitoring studies performed over the previous year in formats agreed to by Forest Service and Licensee during development of implementation plans.
- Review of any planned maintenance.
- Discussion of any foreseeable changes to Project facilities or features.
- Discussion of any necessary revisions or modifications to implementation plans approved as part of this license.
- Discussion of needed protection measures for species newly listed as threatened, endangered, or sensitive, or changes to existing management plans that may no longer be warranted due to delisting of species or, to incorporate new knowledge about a species requiring protection. Discussion of needed protection measures for newly discovered cultural resource sites.
- Discussion of elements of current year maintenance plans, e.g. road and trail maintenance.
- Discussion of any planned pesticide use.

A record of the meeting shall be kept by Licensee and shall include any recommendations made by Forest Service for the protection of National Forest System lands and resources. Licensee shall file the meeting record, if requested, with the Commission no later than 60 days following the meeting.

### **Condition No. 14 - Consultation Group**

The Licensee shall, within 3 months of license issuance, establish a Consultation Group as follows.

#### **Purpose**

The primary purpose of Consultation Group is to provide a forum for the Licensee to consult with resource agencies and other interested parties on the following:

The Annual Meeting as described in Condition No. 13, Consultation. To the extent topics covered in Condition No. 13 affect project-affected areas outside Forest Service jurisdiction, consultation with appropriate resource agencies on those same topics will occur at the Annual Meeting, other Consultation Group meetings, or as otherwise agreed with the Licensee and appropriate resource agencies. License shall provide copies of the meeting materials to those who request it.

Plans that are developed as required by the new license and plans that require specific consultation processes during implementation.

Proposed temporary or permanent modifications to license conditions.

Licensee shall also provide notification of license compliance deviations to the current members of the Consultation Group.

### **Decision Making**

The Licensee will ensure that the Consultation Group reports its recommendations to the Forest Service, South Carolina Department of Natural Resources and United States Fish and Wildlife Service. The Forest Service shall be responsible for final addressing matters covered by the Section 4(e) Conditions. Other agencies shall be responsible for final decisions within their jurisdictions. Licensee shall also ensure that consultation, permitting, and any necessary approvals within the jurisdiction of other agencies are completed. Licensee shall implement license conditions as approved and directed by the Commission.

### **Participation**

In addition to the Licensee, Forest Service, South Carolina Department of Natural Resources and United States Fish and Wildlife Services, Consultation Group meetings shall be open to any organization or individual that notifies the Licensee in writing of interest in participating in the Annual Meeting or Consultation Group meetings. The Consultation Group should establish mutually agreeable process guidelines for conducting effective and efficient meetings no later than 1 year after license issuance. Each organization or individual shall be responsible for providing notification information to the Licensee and shall be responsible for keeping current a single point of contact for purposes of notification related to the Consultation Group. If a participant is interested in a particular meeting or topic, the participant is responsible for ensuring they are represented.

### **Condition No. 15 - Approval of Changes**

Notwithstanding any license authorization to make changes to the Project, when such changes directly affect National Forest System lands, Licensee shall obtain written approval from Forest Service prior to making any changes in any constructed Project features or facilities, or in the uses of Project lands and waters or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from Forest Service, and a minimum of 60 days prior to initiating any such changes, Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of Forest Service for such changes. Licensee shall file an exact copy of this report with Forest Service at the same time it is filed with the Commission. This condition does not relieve Licensee from the amendment or other requirements of Article 2 or Article 3 of this license.

**Condition No. 16 - Surveys, Land Corners**

Licensee shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments on National Forest System lands are destroyed by an act or omission of Licensee, in connection with the use and/or occupancy authorized by this license, depending on the type of monument destroyed, Licensee shall reestablish or reference same in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) the specifications of the County Surveyor, or (3) the specifications of Forest Service. Further, Licensee shall ensure that any such official survey records affected are amended as provided by law.

**Condition No. 17 – Signs**

Licensee shall consult with Forest Service prior to erecting signs related to safety issues on National Forest System lands covered by the license. Prior to Licensee erecting any other signs or advertising devices on National Forest System lands covered by the license, Licensee must obtain the approval of Forest Service as to location, design, size, color, and message. Licensee shall be responsible for maintaining all Licensee-erected signs to neat and presentable standards.

**PART II: STANDARD RESOURCE CONDITIONS****Condition No. 18 – Invasive Species Management****Aquatic Invasive Species Management and Monitoring Plan**

Within one year of license issuance, Licensee shall develop an Aquatic Invasive Species (AIS) Plan that meets applicable State and Federal laws and regulations. The plan shall be approved by Forest Service after consultation with US Fish and Wildlife Service. The applicable State and Federal resource agencies shall be responsible for making the determination as to whether the AIS Plan complies with the State and/or Federal regulations of their respective agencies.

**Public Education Program**

The AIS Plan shall include a public education program, including appropriate signage and information pamphlets at designated public boat access. The following shall be addressed:

- Draining water from boat, motor, bilge, live well and bait containers before leaving a water access site.
- Removing visible plants, animals and mud from boat before leaving waterbody.
- Cleaning and drying boats and fishing equipment using accepted protocols for the prevention of all AIS before entering any waterbody area.
- Disposing of unwanted bait in trash, including earthworms.
- Avoiding the release of plants and animals into a waterbody unless they originally came from that waterbody.

AIS information shall be included on Project websites that provide public information on Project facilities. The public information website will also include information on the amphibian chytrid fungus.

### Best Management Practices

The AIS Plan shall specify that Licensee is responsible for developing BMPs for individual Project O&M activities, performed by Licensee and/or its contractors, which activities have the potential to introduce AIS into a Project reservoir, to prevent the spread of AIS, and submitting them to Forest Service for review at the Annual Consultation Meeting required in the FERC license.

Development of BMPs for Project activities shall include but not be limited to the following:

- List of AIS with potential to be introduced.
- Control or preventive measures for AIS.
- Identification of critical control points in the Project activity sequence at which to prevent the introduction of AIS.
- Any necessary implementation monitoring for potential AIS to ensure BMPs are followed.
- Actions that will be taken if an introduction of AIS is found.

If invasive aquatic species are detected within any reservoir or river, Licensee will consult with the appropriate agencies and institute an appropriate plan of action.

### Monitoring and Reporting

The AIS Plan shall include a specific monitoring program that addresses all reservoirs that have a boat launch, or identified as having boating access, and that follows State and/or Federal laws, regulations, and policies. Mapping and monitoring results shall be provided to Forest Service, US Fish and Wildlife Service and SC Department of Natural Resources.

### Plan Revisions

Licensee, in consultation with Forest Service, US Fish and Wildlife Service and SC Department of Natural Resources shall review, update, and/or revise the AIS Plan, as determined necessary by Forest Service in consultation with US Fish and Wildlife Service and SC Department of Natural Resources, when substantial changes in the existing conditions occur. Additional monitoring may be part of any plan revisions. Changes or revisions to the Plan would be expected if AIS conditions change as a result of unforeseen effects, either from new or existing Project-related activities, the potential for new AIS to occur, the discovery of a new AIS within the Project, or from natural events or if other regulatory or legal requirements are established.

Licensee shall include all relevant documentation of coordination/consultation with the updated Plan filed with the Commission.

### **Vegetation and Invasive Weed Management Plan**

Within 1 year of license issuance, Licensee shall complete, in consultation with Forest Service and approved by Forest Service, a Vegetation and Non-Native Invasive Plant Management (NNIP) Management Plan (Plan) for all National Forest System lands potentially affected by the Project. Targeted NNIP will be those species defined by the Regional Forester Southern Region, Southern Research Station and South Carolina Exotic Plant Pest Council or identified as Forest Service species of concern.

The Plan will address special status species, terrestrial NNIP species, and revegetation within the Project boundary and adjacent to Project features directly affecting National Forest System lands including Project and project related roads, facilities, and distribution and transmission lines.

Minimum components of the Plan shall include, but may not be limited to:

- Special status species management: protection, monitoring, frequency of surveys, internal education, reporting, and adaptive management.
- Sensitive area protection, including guidelines for conducting activities that reduce the effects to sensitive resources.
- Non-native invasive plant (NNIP) species management: frequency of surveys, guidelines for prevention, treatment, internal education, monitoring, reporting, guidelines for conducting weed risk assessment for new project feature development, including an adaptive management element to implement methods for prevention of aquatic invasive weeds, as necessary.
- Methods that ensure early detection and treatment of NNIP.
- Guidelines for treatment of NNIP populations on Federal lands within the FERC Project boundary. In areas where NNIP populations that are determined to be project-related extend outside the FERC Project boundary, treatments would extend up to ¼ mile beyond the FERC Project boundary. If noxious weed populations extend more than ¼ mile from the FERC Project Boundary, and are determined to be Project-related, Licensee will consult with Forest Service or Bureau of Land Management (BLM) to determine if the populations should be treated and, if so, the appropriate treatment methods. The same treatments are recommended on Licensee lands.
- Guidelines for conducting Licensee's inspections of equipment and vehicle for NNIPs.
- List of target NNIPs agreed to and approved by BLM and Forest Service.
- Revegetation implementation and monitoring.
- Treatment protocols for vegetation management, hazardous fuels reduction, and hazard tree management for protection of Project facilities and Project-affected resources within the Project affected area.
- Pesticide/herbicide use approval and restrictions.
- Annual reporting guidelines for the Annual Meeting.

Licensee, in consultation with Forest Service, will review, update, and/or revise the Plan if substantial changes in vegetation management occur. Changes may be implemented if monitoring feedback indicates that resource objectives are not being met.

Any updates to the Plan would be prepared in coordination and consultation with Forest Service. The Licensee shall allow the Forest Service at least 60 days, unless waived by the Forest Service, to comment and make recommendations before Licensee files the updated plan with the Commission. Any changes to the Plan shall be approved by Forest Service. Licensee would include all relevant documentation of coordination/consultation with the updated Plan filed with the Commission.

## **Condition No. 19 - Special Status Species**

### **Biological Evaluations**

Before taking actions to construct new project features on National Forest System lands that may affect Forest Service special status species or their critical habitat on National Forest System land, Licensee shall prepare and submit a biological evaluation (BE) for Forest Service approval. Forest Service special status species are defined as species designated by the Regional Forester as sensitive species or species of conservation concern. The BE shall evaluate the potential impact of the action on the species or its habitat. Forest Service may require mitigation measures for the protection of the affected species on National Forest System land.

The BE shall:

- Include procedures to minimize or avoid adverse effects to Forest Service special status species.
- Ensure project-related activities shall meet restrictions included in site management plans for Forest Service special status species.
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to special status species.

### **Annual Review of Special-Status Species Lists and Assessment of New Species on Federal Land**

Licensee shall, beginning the first full calendar year after license issuance, in consultation with Forest Service, annually review the current lists of special status species (species that are Federally Endangered or Threatened, Proposed Threatened or Endangered, Forest Service Sensitive, or Francis Marion-Sumter National Forest Watch Lists, and State Threatened or Endangered, State Species of Special Concern) that might occur on National Forest System lands, as appropriate, in the Project area that may be directly affected by Project operations.

When a species is added to one or more of the lists, Forest Service, in consultation with Licensee shall determine if the species or un-surveyed suitable habitat for the species is likely to occur on such National Forest System lands, as appropriate. For such newly added species, if Forest Service determines that the species is likely to occur on such National Forest System lands, Licensee shall develop and implement a study plan in consultation with Forest Service to reasonably assess the effects of the project on the species. Licensee shall prepare a report on the study including objectives, methods, results, recommended resource measures where appropriate, and a schedule of implementation, and shall provide a draft of the final report to the Forest Service for review and approval. Licensee shall file the report, including evidence of

consultation, with the Commission and shall implement those resource management measures required by the Commission.

If new occurrences of Forest Service special status species as defined above are detected prior to or during ongoing construction, operation, or maintenance of the Project or during Project operations, Licensee shall immediately notify Forest Service. If Forest Service determines that the Project-related activities are adversely affecting FS sensitive or watch list species, Licensee shall, in consultation with Forest Service, develop and implement appropriate protection measures.

If new occurrences of state or federally listed or proposed threatened or endangered species are detected prior to or during ongoing construction, operation, or maintenance of the Project or during Project operations, Licensee shall immediately notify the Commission, Forest Service and the relevant Service Agency for consultation or conference in accordance with the Endangered Species Act. If state listed or fully protected species are affected, Forest Service and US Fish and Wildlife Service shall be notified.

### **Condition No. 20– Erosion and Sediment Control and Management**

Within 1 year of license issuance, Licensee shall file with the Commission an Erosion and Sediment Control Management Plan developed in consultation with Forest Service and other interested parties, and approved by Forest Service that will provide direction for treating erosion and controlling sedimentation within the Project and Project-affected National Forest System lands during the term of the new license. Upon Commission approval, Licensee shall implement the Plan.

The Plan shall include at a minimum the components included in the referenced by this condition, unless otherwise agreed to by Forest Service during Plan finalization. Minimum components include, but may not be limited to:

#### **Erosion Control Guidelines for Existing Project-Affected Areas**

- Methods for initial and periodic inventory and monitoring of the entire Project area and Project-affected National Forest System lands to identify erosion sites and assess site condition for each. Periodic monitoring and inventory will include recording effectiveness of erosion treatment measures, and identification of new erosion sites for the term of the new license.
- Criteria for ranking and treating erosion sites including a risk rating and hazard assessment for scheduling erosion treatment measures and monitoring at each site.
- Erosion control measures that incorporate current standards, follow Forest Service regulations and guidance (e.g. LRMP, RMOs, BMPs), are customized to site-specific conditions, and approved by Forest Service.
- Develop and implement a schedule for treatment (e.g. repair, mitigate, monitor) of erosion sites, including a list of sites requiring immediate mitigation and schedule for their implementation.
- Effectiveness monitoring of completed erosion control treatment measures after treatment

in order to determine if further erosion control measures are needed. If erosion control measures are not effective, Licensee will implement additional erosion control measures approved by Forest Service and continue monitoring until the site has stabilized.

- Protocols for emergency erosion and sediment control.
- Process for documenting and reporting inventory and monitoring results including periodic plan review and revision. Documentation shall include a Forest Service compatible GIS database for maps keyed to a narrative description of detailed, site-specific, erosion treatment measures and sediment monitoring results.

### **Erosion Control Guidelines for New Construction or Non-Routine Maintenance**

Licensee shall develop site-specific temporary erosion control measures for each project to be approved by Forest Service for each project. These temporary measures will prevent erosion, stream sedimentation, dust, and soil mass movement during the period of ground disturbance until replaced by permanent measures.

### **Condition No. 21– Fire Management and Response Plan**

Within one year of license issuance, Licensee shall complete, in consultation with Forest Service and approved by Forest Service, a Fire and Fuels Management Plan (FFMP). The plan shall set forth in detail Licensee's responsibility for the prevention (including fuels treatment), reporting, emergency response, and investigation of fires related to Project operations. Upon Commission approval, Licensee shall implement the Plan.

Minimum components include, but may not be limited to:

- Fuels Treatment/Vegetation Management: Identification of fire hazard reduction measures and reoccurring maintenance measures to prevent the escape of project-induced fires.
- Fire Prevention and Patrol: Address fire danger and public safety associated with project induced recreation, including fire danger associated with dispersed camping, existing and proposed developed recreation sites, trails, and vehicle access. Identify water drafting sites and other fire suppression resources.
- Emergency Response Preparedness: Analyze fire prevention needs including equipment and personnel availability.
- Reporting: Licensee shall report any project related fires immediately to Forest Service.
- Fire Control/Extinguishing: Provide Forest Service a list of the locations of available fire suppression equipment and the location and availability of fire suppression personnel.

### **Condition No. 22 – Annual Employee Training**

Licensee shall, beginning in the first full calendar year after license issuance, annually perform employee awareness training and shall also perform such training when a staff member is first assigned to the Project. The goal of the training shall be to familiarize Licensee's operations and maintenance (O&M) staff with special-status species, noxious weeds and sensitive areas (e.g., special-status plant populations and noxious weed populations) that are known to occur within or

adjacent to the Commission Project Boundary on National Forest System lands, and the procedures for reporting to each agency, as appropriate, to comply with the license requirements. It is not the intent of this measure that Licensee's O&M staff perform surveys or become specialists in the identification of special-status species or noxious weeds. Licensee shall direct its O&M staff to avoid disturbance to sensitive areas, and to advise all Licensee contractors to avoid sensitive areas. If Licensee determines that disturbance of a sensitive area is unavoidable, Licensee shall consult with Forest Service to minimize adverse effects to sensitive resources.

This measure applies to employee training that is not otherwise covered by a specific plan.

### **Condition No. 23 – Non Project Areas (Keitts Bridge Landing Enoree River Bridge Recreation Area)**

The Licensee will coordinate with Forest Service surveyor to determine location of flowage easements and determine Project Area Boundary along with consultation with Forest Service to determine the exact location above the flowage easement in relation to the improvements.

Licensee shall complete, in consultation with Forest Service and approved by Forest Service, a set of detailed construction plans and specifications with drawings for design and construction of a vehicle turn-around area with parking area for six vehicles and a non-motorized canoe/kayak step down facility along with hardened path from parking area to step down location. The present river access (Keitts Bridge) is very steep and unless a gentler slope can be found in the vicinity, steps will need to be designed/constructed to access the river that are sustainable and maintains bank stability. If possible, the improvements to the site need to be Architectural Barriers Act compliant. Any recreational signs installed on Maybinton Road, State Hwy 45, per FERC regulations shall be designed in accordance with Forest Service regulations and approved by Forest Service.

Before taking actions to construct new project features on National Forest System lands that may affect Forest Service special status species or their critical habitat on National Forest System land, Licensee shall prepare and submit a biological evaluation (BE) for Forest Service approval. The BE shall evaluate the potential impact of the action on the species or its habitat. Forest Service may require mitigation measures for the protection of the affected species on National Forest System land.

The BE shall:

- Include procedures to minimize or avoid adverse effects to special status species.
- Ensure project-related activities shall meet restrictions included in site management plans for special status species.
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to special status species.

Licensee shall obtain a special use authorization (Organic Act Permit) from the Forest Service Cultural Resource Coordinator prior to construction of new project features on National Forest System lands that may affect Forest Service cultural resource sites. Licensee shall obtain the

required special use authorization (Organic Act Permit) prior to any ground disturbing activities on National Forest System lands, and the Licensee shall file that special use authorization with the Commission. Licensee shall prepare and submit an Archaeological Evaluation for Forest Service approval.

The Archaeological Evaluation shall:

- Include procedures to minimize or avoid adverse effects to cultural sites.
- Ensure project-related activities shall meet restrictions included in site management plans for cultural site.
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce adverse effects to newly discovered cultural resource sites.

## APPENDIX C

### U.S. DEPARTMENT OF THE COMMERCE – NATIONAL MARINE FISHERIES SERVICE SECTION 18 FISHWAY PRESCRIPTION Filed September 30, 2019

#### 6.3 Section 18 Preliminary Fishway Prescription

The NMFS hereby submits the following Preliminary Prescription for Fishways pursuant to Section 18 of the FPA, 16 USC § 811. Section 18 of the FPA states in relevant part that “the Commission must require the construction, maintenance, and operation by a Licensee of . . . such fishways as may be prescribed by the Secretary of Commerce or the Secretary of the Interior.” Congress provided guidance on the term “fishway” in 1992 when it stated as follows:

“The items which may constitute a ‘fishway’ under Section 18 for the safe and timely upstream and downstream passage of fish must be limited to physical structures, facilities, or devices necessary to maintain all life stages of such fish, and Project operations and measures related to such structures, facilities, or devices which are necessary to ensure the effectiveness of such structures, facilities, or devices for such fish.” Pub. L. 102-486, Title XVII, § 1701(b), Oct. 24, 1992.

The following mandatory fishway prescription is based on the best biological and engineering information available at this time. Specific requirements for passage are based on biological triggers established by the Santee Accord. The NMFS acknowledges biological triggers are not expected to be met for ten years or longer, therefore delaying the development of an implementation schedule at this time.

##### 6.3.1 General Terms and Conditions

1. As defined in the Santee Accord, a Fish Passage Feasibility Assessment shall be initiated when the Columbia Fishway annually passes 46,400 American shad or 185,600 blueback herring for any three years in a five-year period. Construction of a fishway shall commence and shall be completed within three years of the Columbia Fishway annually passing 69,600 American shad or 348,000 blueback herring for any three years in a five-year period. The Fish Passage Feasibility Assessment shall include design and construction schedules with the NMFS, in consultation with the Fishery Technical Committee (FTC), having opportunities to review and approve the 30, 60, and 90 percent designs before construction begins.
2. Fishways shall be constructed, operated, and maintained to provide safe, timely, and effective passage for American shad and blueback herring at the Licensee’s expense.

3. The NMFS reserves the authority to defer the timing of construction and/or implementation of fishways based on new information that may warrant a change to prescription schedules such as any results from studies or monitoring, changes to the Columbia Fishway, or changes to recreational fishing regulations, or petitions from the Licensee for an extension that is approved by the NMFS. The Licensee shall (1) notify, and (2) obtain approval from the NMFS for any modifications to schedules or extensions of time to comply with the provisions included in the prescription for fishways.
4. Fishways shall be maintained and operated, at the Licensee's expense throughout the upstream and downstream migration periods for the target species. The migration periods for target species are as follows, subject to change by the FTC, based on annual monitoring of fish runs:

<u>Current Target Species</u>	<u>Upstream Migration</u>	<u>Downstream Migration</u>
American shad	March 1 to May 15	late summer to fall
Blueback herring	March 1 to May 15	late summer to fall

5. The Licensee shall keep all Parr Shoals fishways in proper order and shall keep fishway areas clear of trash, logs, and material that would hinder passage. Anticipated maintenance shall be performed sufficiently before a migratory period such that the fishways can be tested and inspected, and the fishway will operate effectively prior to and during the migratory periods. In consultation with the FTC, the Licensee shall develop a fishway operation and maintenance plan (O&M plan) for each fishway, including a fishway and overall facility operational log, describing the anticipated fishway operational protocols, maintenance, maintenance schedule, and contingencies. The plans shall be submitted to the FWS, NMFS, and SCDNR for review and approval. Upon such approval, the plans shall be submitted to the Commission.
6. The Licensee shall provide the FWS, NMFS, and SCDNR personnel access to the Parr Project site and to pertinent Parr Project records for the purpose of inspecting the fishways, as needed, to determine compliance with the fishway prescriptions and for general evaluation and oversight observations.
7. The Licensee shall develop detailed design, construction, evaluation, and monitoring plans for review and approval by the NMFS in coordination with the FWS and SCDNR prior to construction. All original plans and subsequent modifications shall be conducted according to guidance and specified criteria provided by NMFS for the design of fish screens, fishways, and other fish passage structures. The Licensee shall have all designs reviewed by the FTC. The Licensee and its agents must establish close consultation with the FWS and NMFS fisheries engineering and fish

passage specialists in coordination with SCDNR at the outset of design and throughout the entire process. The initial design meetings shall commence at the pre-design, or conceptual-level design phase. Prior to advancing to feasibility-level of design, the Licensee must obtain concurrence from the FWS and NMFS in coordination with SCDNR all preferred alternatives for each independent facility or any major feature of a facility. The Licensee shall schedule and provide a minimum of 90 days for the FWS and NMFS in coordination with SCDNR to review and approve these comprehensive plans. Shorter review periods may be possible, depending on the nature of the subject, as approved by the FWS and NMFS. The Licensee shall implement any design modifications as required by the FWS and NMFS as necessary to fulfill the objective of safe, timely, and effective passage for all target species considered. Following NMFS approval, the Licensee shall submit final design plans to the Commission for final approval prior to the commencement of construction activities.

8. The Licensee shall develop plans and schedules and conduct fishway effectiveness studies in consultation with the FTC on both upstream and downstream facilities for three fish passage seasons. Additional seasonal sampling may be necessary depending on unforeseen circumstances such as weather conditions. The plans and results of effectiveness studies shall be submitted to the FTC prior to being filed with the Commission. If the Licensee disagrees with any of the comments or recommendations from the fishery resource agencies, it shall provide an explanation in its filing with the Commission.