147 FERC ¶ 62,049
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Shelbyville Hydro LLC Project No. 13011-003

ORDER ISSUING ORIGINAL MAJOR LICENSE

(April 18, 2014)

INTRODUCTION

1. On October 28, 2011, Shelbyville Hydro LLC (Shelbyville Hydro), filed, pursuant to Part I of the Federal Power Act (FPA),[1] an application for an original license to construct, operate, and maintain its proposed Lake Shelbyville Dam Hydroelectric Project No. 13011-003 (Lake Shelbyville Project or project). The 6.8-megawatt (MW) project will be located at the U.S. Army Corps of Engineers' (Corps) Lake Shelbyville Dam on the Kaskaskia River in Shelby County, Illinois. The project will occupy approximately 3.24 acres of federal land administered by the Corps.[2]

2. As discussed below, this order issues an original license for the Lake Shelbyville Dam Project.

BACKGROUND

3. On May 10, 2012, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing and soliciting motions to intervene and protests.[3] No motions to intervene were filed.

4. On July 18, 2012, the Commission issued a public notice that was published in the *Federal Register* indicating the application was ready for environmental analysis and soliciting comments, recommendations, terms and conditions, and fishway prescriptions.[4] No responses were filed.

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[1] 16 U.S.C. §§ 791(a)–825(r) (2012).

[2] The project would utilize the head potential of the Corps' Lake Shelbyville Dam and would occupy lands of the United States. For either of these reasons, section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) (2012), requires that the project be licensed.

[3] 77 *Fed. Reg.* 28866-02 (May 16, 2012).

[4] 77 *Fed. Reg.* 43584-01 (July 25, 2012).

5. An Environmental Assessment (EA) was prepared by Commission staff and issued on June 7, 2013, analyzing the impacts of the proposed project and alternatives to it. The U.S. Environmental Protection Agency (EPA) filed comments on the EA. The comments and recommendations have been fully considered in determining whether, and under what conditions, to issue this license.

PROJECT DESCRIPTION

A. Existing Corps Facilities

6. The Lake Shelbyville Project will use the existing Corps' Lake Shelbyville Dam, which is owned and operated by the Corps and is not part of the licensed project. Lake Shelbyville Dam is an earthen embankment with an elevation of 643 feet above mean sea level (msl). The dam is 3,025 feet long and rises 108 feet above the river bed. The dam includes a concrete spillway located at 593 feet msl with three Tainter gates that are 45 feet wide by 37 feet high and two low-level regulating outlet structures that release water through the face of the spillway. The dam provides a combined capacity of over 160,000 cubic feet per second (cfs) at a maximum pool elevation of 638.2 feet msl, and over 100,000 cfs at elevation 626.5 msl, the top of the flood control pool. The impoundment above Lake Shelbyville Dam has a maximum storage capacity of 684,000 acre-feet. The average depth of the reservoir is 16 feet, and the maximum is 67 feet.

B. Current Corps Operation

7. Lake Shelbyville Dam is operated to control flooding in the Kaskaskia River Valley, reduce flood stages in the Mississippi River, supplement low flow for navigation in the middle and lower Mississippi River, and improve domestic and industrial water supply. Of the 684,000 acre-feet of storage at Lake Shelbyville, 474,000 acre-feet have been designated for flood control.

8. The Corps operates Lake Shelbyville based on a guide curve for reservoir surface elevations as follows: (1) December 15 to April 1 - elevation 594.0 feet msl; (2) April 1 to May 1 - elevation 596.0 feet msl; and (3) May 1 to December 15 - elevation 599.7 feet msl. The dates have an allowable variance of plus or minus 14 days. When the Corps is not using Lake Shelbyville for flood control storage, the elevations have a variance of plus or minus 0.5 foot except for the winter guide curve elevation of 594.0 feet msl which is the targeted minimum level.

9. The Corps maintains a minimum flow of 10 cfs in the Kaskaskia River for water quality purposes which is measured at a United States Geological Survey gage located 700 feet below the dam. Between May 1 and November 1, the Corps releases a maximum of 1,800 cfs until the lake elevation reaches 610.0 feet msl. When water levels are above the guide curve from November 1 through April 30, and when water levels are

above 610.0 feet msl in the May 1 through November 1 period, the Corps releases up to a maximum of 4,500 cfs to bring the elevation back down to its target for the period.

C. Proposed Project Facilities

10. The Lake Shelbyville Project will use the existing Lake Shelbyville Dam, intake structure, Tainter gates and outlet structures that control outflow at the spillway, along with the following new facilities: (1) a trashrack with 4-inch spacing integrated into the Corps' existing 9-foot-wide by 15-foot-tall west intake structure; (2) a steel liner installed in the Corps' existing west outlet chamber; (3) a 13-foot-diameter bifurcation chamber[5] and river release valve, which can be opened to pass excess flows into the stilling basin, installed at the existing west outlet structure; (4) a 575-foot-long, 12-foot-diameter steel penstock extending from the bifurcation chamber; (5) a 60-foot-long, 50-foot-wide, 68-foot-high concrete powerhouse containing a 6.8-MW Kaplan turbine-generator; (6) an approximately 24.5-foot-wide, 30-foot-long, 6.7-foot-tall draft tube; (7) a 105-foot-wide, 49-foot-long tailrace angled at a slope of 8 horizontal to 1 vertical; (8) a 12.47-kilovolt, 407-foot-long buried transmission line connecting the project to an existing Shelby Electric Cooperative substation located 900 feet downstream of the dam; (9) a four-foot by six-foot transformer pad located adjacent to the powerhouse; (10) a 300-foot-long access road that would pass to the west of the powerhouse; (11) a parking lot on the west side of the powerhouse; and (12) appurtenant facilities.

D. Project Boundary

11. The project boundary encloses the intake, Tainter gates, outlet structures, penstock, powerhouse, tailrace, transformer, and the 407 feet of 12.47-kV buried transmission line. The project boundary encompasses a total of 3.24 acres, all of which are lands managed by the Corps. The Corps' dam and reservoir are not included in the project boundary.

E. Proposed Project Operation

12. Shelbyville Hydro proposes to operate the hydropower project in a run-of-release mode, utilizing releases from Lake Shelbyville as they are provided by the Corps. The project will generate when releases are between 130 cfs and 1,500 cfs. When releases are below 130 cfs or greater than 1,500 cfs, the flows will pass through the Corps' existing outlet structures.

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[5] The bifurcation chamber consists of a river release valve that allows flows to be passed three ways in order to match the outlet capacity of the Corps' existing outlet structure: (1) through the project penstock; (2) through the river release valve into the stilling basin; or (3) a combination of both.

F. Proposed Measures

13. To minimize soil erosion and sedimentation associated with construction of the project, Shelbyville Hydro proposes a Soil Erosion and Control Plan that includes measures for limiting grading and vehicle traffic, separating and stockpiling soil in excavation and staging areas and isolating them from water sources, using silt fencing and straw berms, providing for safe fuel storage, and conducting erosion and turbidity monitoring.

14. To prevent contamination of the project site during construction and operation, Shelbyville Hydro proposes a Hazardous Substances Spill Prevention and Cleanup Plan, which includes provisions for site-specific oil and hazardous substances storage, spill prevention, and cleanup.

15. To ensure project operation does not decrease dissolved oxygen (DO) levels downstream of the project, Shelbyville Hydro proposes a Dissolved Oxygen Monitoring and Management Plan that includes installing a supplemental aeration system, monitoring the efficacy of the aeration system over a five-month period, and monitoring downstream DO for the term of the license.

16. To monitor and minimize the spread of zebra mussels, Shelbyville Hydro proposes a Zebra Mussel Monitoring and Control Plan.

17. To protect fish that may be trapped during construction of the cofferdam, Shelbyville Hydro proposes to develop a cofferdam fish salvage plan.

18. To protect upstream migrating fish, Shelbyville Hydro proposes to provide an analysis of the potential for blade strike, considering both the probable discharge velocity and the swimming speed of fish that may be moving upstream in the spring, in a tailrace turbine strike evaluation report.

19. To mitigate the loss of vegetation during project construction, Shelbyville Hydro proposes a Revegetation Management Plan that includes provisions for reestablishing native plants in disturbed areas, and avoiding sensitive plants that occur within the project boundary during construction.

20. To minimize the spread of invasive plants, Shelbyville Hydro proposes a Noxious Weed Management Plan that includes measures for minimizing the establishment of invasive weed species in areas disturbed by project construction.

21. To mitigate impacts on recreation, Shelbyville Hydro proposes a Construction Recreation Plan that includes provisions for preventing public access to construction areas, minimizing the time that access to recreation areas is restricted, and descriptions of

any temporary facilities that will be used if permanent recreation facilities (e.g., fishing steps) or access roads are closed.

22. Shelbyville Hydro proposes to cease all construction activities if archaeological resources are discovered during project construction, and consult with the Commission and Illinois State Historic Preservation Officer (Illinois SHPO) to determine appropriate treatment.

SUMMARY OF LICENSE REQUIREMENTS

23. The license, which authorizes 6.8 MW of renewable energy, includes Shelbyville Hydro's proposed environmental measures as noted above and the following additional staff-recommended measures, some of which are modifications to Shelbyville Hydro's proposals.

24. To ensure that any adverse effects on water quality (e.g., turbidity due to erosion) during project operation are identified, the license requires a stream bank stability monitoring plan that includes a provision for a visual assessment of bank stability in the project tailrace after one year of project operation. Monitoring results will provide information necessary to distinguish bank erosion resulting from altered flow patterns in the tailrace due to project operations.

25. To provide for DO compliance monitoring, the license requires Shelbyville Hydro to notify the Commission in the event that DO falls below the current state DO standards and to file a report including proposed, or agency recommended, corrective actions, as part of the dissolved oxygen monitoring and management plan that includes.

26. To prevent the transport and establishment of noxious weeds during project construction and provide longer-term protection from weeds by establishing healthy-plant communities within the project area, the license requires a noxious weed management plan with a provision to establish benchmarks for the percentage of noxious weed cover that will trigger the need for control measures.

27. To provide for public safety and ensure that recreational access is being provided during project construction, the license requires a construction recreation plan with provisions for public safety, an implementation schedule that minimizes the time that access to recreation areas is restricted, and descriptions of any temporary facilities that will be used if permanent recreation facilities (e.g., fishing steps) or access roads are closed.

28. If a previously unidentified archaeological resource is discovered during project construction, operation, or maintenance, or other project-related activities, the license requires Shelbyville Hydro to stop all land-clearing and land-disturbing activities and

consult with the Illinois SHPO, the Kickapoo Tribe of Oklahoma, and the Peoria Tribe of Indians of Oklahoma.

WATER QUALITY CERTIFICATION

29. Under section 401(a)(1) of the Clean Water Act (CWA),[6] 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 shall become a condition of any federal license that authorizes construction or operation of the project.[7]

30. On October 28, 2012, Shelbyville Hydro applied to the Illinois Environmental Protection Agency (Illinois EPA) for certification for the Lake Shelbyville Project. Illinois EPA received the application on October 29, 2012, and has not acted on it. Therefore, because the Illinois EPA did not act on the application within one year, certification is deemed waived.

COASTAL ZONE MANAGEMENT ACT

31. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),[8] the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within six months of its receipt of the applicant's certification. By email dated February 15, 2013, and filed May 30, 2013, Illinois EPA stated that a Coastal Use Permit is not required because the project is outside the Illinois Coastal Zone.

SECTION 18 FISHWAY PRESCRIPTION

32. Section 18 of the FPA[9] provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be

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[6] 33 U.S.C § 1341(a)(1) (2012).

[7] *Id.* § 1341(d).

[8] 16 U.S.C. § 1456(c)(3)(A) (2012).

[9] *Id.* § 811 (2012).

prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. No fishway prescriptions or reservations of authority were filed under section 18 of the FPA.

THREATENED AND ENDANGERED SPECIES

33. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)[10] 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 their designated critical habitat.

34. There are two federally listed species with the potential to occur in the project area: the endangered Indiana bat and piping plover. In the EA,[11] staff determined that with its recommended measures, licensing the Lake Shelbyville Project is not likely to adversely affect the Indiana bat or piping plover. The FWS concurred with these findings by letter filed June 26, 2013. No further action under the ESA is required.

NATIONAL HISTORIC PRESERVATION ACT

35. Under section 106 of the National Historic Preservation Act[12] and its implementing regulations,[13] federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

36. In letters filed October 28, 2011, and June 15, 2012, the Illinois SHPO determined that no historic properties would be affected by the construction and operation of the project. In the EA,[14] staff concluded that while there are no known surface or sub-surface archaeological resources, such resources could be discovered as a result of project

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[10] *Id.* § 1536(a)(2).

[11] EA at 7, 56.

[12] 16 U.S.C. § 470 *et seq.* (2012).

[13] 36 C.F.R. Part 800 (2013).

[14] EA at 68.

construction, operation, or maintenance. Therefore, if archaeological resources are discovered during the term of the license, Article 411 requires Shelbyville Hydro to stop all land-clearing and land-disturbing activities (if any) and consult with the Illinois SHPO, the Kickapoo Tribe of Oklahoma, and the Peoria Tribe of Indians of Oklahoma. If a discovered resource is eligible for the National Register of Historic Places, Article 411 requires Shelbyville Hydro to develop an Historic Properties Management Plan for Commission approval.

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

37. Section 10(j)(1) of the FPA[15] 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,[16] to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

38. Neither FWS nor the Illinois Department of Natural Resources (Illinois DNR) filed section 10(j) recommendations for the Lake Shelbyville Project.

SECTION 10(a)(1) OF THE FPA

39. Section 10(a)(1) of the FPA[17] 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.

A. Project Operation

40. Shelbyville Hydro proposes to operate the project in a run-of-release mode, with no modifications to the quantity or timing of the Corps' release schedule, to minimize any effects on water quality, water quantity, fish, and other aquatic resources. Operating in this manner will ensure that the hydropower project does not alter the Corps' current

[15] 16 U.S.C. § 803(j)(1) (2012).

[16] *Id.* §§ 661 *et seq.*

[17] *Id.* § 803(a)(1).

reservoir management or flow release program. Therefore, Article 401 requires that the licensee operate the project in a run-of-release mode.

B. Soil Erosion Control

41. Shelbyville Hydro proposes a Soil Erosion Control Plan to help ensure that construction-related activities do not adversely affect water resources in the project area. In the EA,[18] staff recommended a soil erosion control plan to protect water quality and aquatic habitat from construction-related activities by ensuring the minimization of any associated erosion and sedimentation. Article 304 of this license requires Shelbyville Hydro to submit a soil erosion and sediment control plan as part of the preconstruction requirements.

C. Stream Bank Stability Monitoring

42. Shelbyville Hydro proposes to construct the project along the west bank of the Kaskaskia River such that tailrace flows will be directed towards the east bank, perpendicular to the current direction of flow released from the existing outlet structures. This would alter the flow pattern in the tailrace, as flows would no longer just pass over the dam, which could create some stream bank erosion. In the EA,[19] staff recommended that Shelbyville Hydro develop a stream bank stability monitoring plan to evaluate the effects of project operation on bank stability. Article 402 requires Shelbyville Hydro to develop the plan.

D. Hazardous Substances Spill Prevention and Cleanup

43. Shelbyville Hydro proposes to implement a Hazardous Substances Spill Prevention and Cleanup Plan with provisions for site-specific oil and hazardous substances storage, spill prevention, and cleanup measures that would be implemented during project construction. In the EA,[20] staff concluded that the proposed plan would adequately limit adverse effects that may result from accidental hazardous substance spills. Therefore, Article 403 approves the Hazardous Substances Spill Prevention and Cleanup Plan.

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[18] *See* EA at 22-23.

[19] *See id.* at 23.

[20] *Id.* at 37.

E. Zebra Mussel Monitoring and Control

44. Shelbyville Hydro proposes to implement a Zebra Mussel Monitoring and Control Plan to prevent the spread of zebra mussels on project facilities and the surrounding area. In the EA,[21] staff concluded that the proposed plan would minimize the spread of zebra mussels. Therefore, Article 406 approves the Zebra Mussel Monitoring and Control Plan.

F. Cofferdam Fish Salvage

45. During construction, Shelbyville Hydro will use cofferdams to isolate construction areas (i.e., powerhouse excavation area and appurtenant facilities) from the river. Game fish such as sauger, muskellunge, bluegill, bass, and crappie, could be trapped behind the cofferdams. Shelbyville Hydro proposes to develop a cofferdam fish salvage plan for relocating fish trapped behind the cofferdam at the start of construction. In the EA,[22] staff determined that developing and implementing a cofferdam fish salvage plan would minimize the mortality of any fish trapped within the cofferdams. Therefore, Article 405 requires Shelbyville Hydro to develop and implement a cofferdam fish salvage plan.

G. Dissolved Oxygen Monitoring and Management

46. The redirection of flow through the proposed powerhouse has the potential to reduce DO concentrations downstream of Lake Shelbyville Dam by reducing aeration that currently occurs when water is spilled over the dam. To mitigate the lower rate of aeration, Shelbyville Hydro proposes a Dissolved Oxygen Monitoring and Management Plan that includes: (1) installation of a turbine air admission system in the turbine casement and an array of fine bubble diffusers in the project tailrace; (2) monitoring DO levels downstream of the dam over a five-month period (June through November) during the first year of project operation to evaluate the effectiveness of the aeration systems at providing minimum DO concentrations consistent with the current state standards of 5 milligrams per liter (mg/L) from March through July and 3.5 mg/L from August through February; (3) and monitoring hourly DO levels downstream of the dam for the term of the license to identify when aeration is needed.

47. In the EA,[23] staff recommended that the plan be modified to require Commission notification in the event that DO falls below the current state standards and a report that

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[21] *Id.* at 47.

[22] *Id.* at 40.

[23] *See id.* at 37-40.

includes proposed or agency recommended measures to prevent future deviations from occurring. Therefore, Article 404 approves the Dissolved Oxygen Monitoring and Management Plan with these additional provisions.

H. Fish Impingement and Entrainment

48. Project operations could adversely affect fisheries resources by exposing upstream-moving fish to turbine strike in the project tailrace. Shelbyville Hydro proposes to develop a turbine strike evaluation report to describe the potential for upstream migrating fish to swim into the turbine draft tube and be struck or killed by the operating turbine blades.

49. In the EA,[24] staff assessed the potential for blade strike to occur, based on the preliminary dimensions of the draft tube and the swimming speeds of fish found in the project area, and concluded that the potential for turbine-strike mortality on species occurring in the Kaskaskia River is low. Although draft tube barriers are a common fish protection measure on west coast hydropower projects, none of the species in the Kaskaskia River exhibit strong migratory behavior comparable to the anadromous salmonids found on the west coast (i.e., steelhead, Chinook salmon). While some species in the river (e.g., walleye) may exhibit some upstream migration during spring spawning, these movements typically stop at dams or below rapids, where spawning often occurs. Therefore, the license does not require Shelbyville Hydro's proposal for a turbine strike evaluation report. However, nothing in this license precludes Shelbyville Hydro from undertaking this evaluation.

I. Revegetation Management

50. Shelbyville Hydro proposes to implement a Revegetation Management Plan to minimize the effects of project construction on vegetation. In the EA,[25] staff concluded that the proposed plan, which includes revegetating the 6.16 acres temporarily disturbed by project construction, and monitoring the success of restoration, would minimize the effects of project construction activities on vegetation. Therefore, Article 407 approves Shelbyville Hydro's Revegetation Management Plan.

J. Noxious Weed Management

51. Shelbyville Hydro proposes to implement a Noxious Weed Management Plan to prevent and control the spread of noxious weeds. The plan includes semi-annual

[24] *See id.* at 41-46.

[25] *Id.* at 53-54.

monitoring during the first three years following construction to estimate the type and composition of plant cover and map any noxious weeds. The plan also includes semi-annual surveys through the term of the license, with treatment determined, as needed, based on the noxious weed species observed.

52. In the EA,[26] staff concluded that the Noxious Weed Management Plan includes appropriate measures for preventing and controlling the spread of invasive species that could potentially establish after construction of the project. In its comments on the EA, U.S. EPA recommends that Shelbyville Hydro, as part of its plan, develop appropriate benchmarks with Illinois DNR for noxious weed/non-native invasive plant species. An additional provision in the plan to determine benchmarks on the maximum percentage of noxious weed cover, in consultation with the Illinois DNR and the Corps, would establish the thresholds at which treatment may be needed. Therefore, Article 408 requires the Noxious Weed Management Plan to be revised to include the additional provision noted above.

K. Recreation Access

53. There are several recreational areas in the immediate vicinity of Lake Shelbyville Dam, including the Dam West and Dam East recreational areas located just upstream of the dam, the Spillway West and Spillway East recreational areas located just downstream of the dam, and the 4-mile General Dacey Trail that crosses over the dam. Project construction would eliminate some bank fishing access immediately downstream of the dam, would restrict access to some recreational sites,[27] and could cause safety issues for individuals using the area for recreation. To minimize disruption to recreation and provide for public safety during construction, Shelbyville Hydro proposes to implement a Construction Recreation Plan.

54. In the EA,[28] staff noted that the proposed plan does not provide sufficient detail on potential recreational site closures, the timing of such closures, and the need for temporary facilities, nor does it contain documentation of consultation with the Corps and other appropriate agencies. Staff, therefore, recommended that the plan be modified in consultation with the Corps and the Illinois DNR to include this information. Staff also recommended the plan include mitigation measures, including an implementation schedule that minimizes the time that access to recreation areas is restricted, and a

[26] *Id.*

[27] Portions of the Spillway West and Spillway East recreation areas would be used as construction staging areas.

[28] *See id.* at 63-65.

description of any temporary facilities that will be used if permanent recreation facilities (e.g., fishing steps) or access roads are closed. Therefore, Article 409 requires the Construction Recreation Plan to be revised to include the additional provisions noted above.

EXEMPTION OF THE FERC FORM 80 RECREATION REPORT

The Licensed Hydropower Development Recreation Report (Form 80) collects recreation usage data on recreation facilities at projects through the term of their licenses. Since the Corps will continue to own and maintain its recreation facilities at the project and the project has little or no potential for recreation facilities, the licensee is exempt from filing the Form 80 during the term of its license (Article 410).

COMMENTS ON THE EA

A. Dissolved Oxygen

55. U.S. EPA requests clarification on whether Illinois EPA agrees with components of the Dissolved Oxygen Monitoring and Management Plan, including the adaptive management approach and use of the DO aeration systems as corrective measures. U.S. EPA also requests clarification on whether, as part of the plan, Shelbyville Hydro will be required to submit operational water quality reports each year of the license.

56. Illinois EPA has not filed any comments on the Dissolved Oxygen Monitoring and Management Plan. Therefore, it is assumed the agency concurs with the plan.

57. The Dissolved Oxygen Monitoring and Management Plan required by Article 404 of this license requires Shelbyville Hydro, once the project becomes operational, to annually file operational water quality reports with the Commission, as well as with Illinois EPA, throughout the license term.

B. Fish Impingement and Entrainment

58. U.S. EPA states that it is unclear whether Illinois DNR concurs with Commission staff's findings in the EA regarding the effects of the proposed construction and operation of the project on fish impingement and entrainment. Illinois DNR filed no comments in response to the EA. Therefore, it is assumed the agency concurs with the plan.

C. Revegetation Management Plan

59. U.S. EPA recommends that Shelbyville Hydro develop the final plant list for the Revegetation Management Plan in consultation with the Illinois DNR and that the plan include "appropriate benchmarks for live plants (e.g., appropriate percentage of native shrubs and/or grasses per acre or number of live stems per acre)."

60. The Revegetation Management Plan includes the development of a landscape plan in consultation with the Corps prior to ground-disturbing activities that would incorporate local, native shrubs and grasses in plantings, as recommended by U.S. EPA. The Revegetation Management Plan also includes a semi-annual compliance monitoring program to evaluate the success of the revegetation efforts, a filing schedule for annual monitoring reports, and a description of the procedures to be followed if monitoring indicates that revegetation is not successful. Annual monitoring reports will be provided to the Commission, the Corps, and Illinois DNR for review. With these measures already included in the Revegetation Management Plan (Article 407), U.S. EPA's recommendations to consult with Illinois DNR and include benchmarks for live plants are not necessary.

D. Air Quality

61. U.S. EPA recommends the inclusion of appropriate diesel emission best management practices (BMPs), such as regular maintenance on diesel engines, specifications for proper diesel storage and fueling equipment, and other similar measures, in the terms of the license to reduce diesel emissions from construction equipment and to minimize construction impacts to air quality. However, the Hazardous Substances Spill Prevention and Cleanup Plan (Article 403) already includes measures for proper diesel storage and containment and provides for training of contractors and construction personnel in regards to proper storage and fueling of construction-related vehicles. In addition, the Construction Recreation Plan (Article 409) also already includes measures for the proper use and maintenance of construction-related vehicles. Therefore, since these plans will sufficiently minimize impacts to air quality resulting from project construction, U.S. EPA's recommendation to include diesel emission BMPs is not needed.

E. Public Outreach

62. U.S. EPA recommends that the Commission and the Corps "reach out to users (i.e., post a notice of construction on agency websites and a local website(s) for Kaskaskia River recreational opportunities, if one exists, in addition to other forms of notification)." It also recommends that the Commission inform recreation users with signage explaining the timing of construction, the different phases of construction, an explanation of project benefits, and the proposed final appearance of the project site.

63. The revised Construction Recreation Plan (Article 409) will assist in minimizing disruptions to recreation facilities and access, and will protect the public's safety in the project area during construction. To inform and protect the public, the plan contains measures to control traffic, and requires the placement of informative signage, screens and fencing around construction areas, and a line of buoys to restrict boating access in the tailwater area. The plan also requires the restriction of access to certain areas that could

pose a danger to public safety, and it also includes additional measures that will ensure public safety and adequate access during construction and restoration, as well as mitigation for the effects of construction and operation on recreational resources in the project area. Because the revised Construction Recreation Plan will adequately inform and protect the public, U.S. EPA's recommendation for additional public outreach is not adopted.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

64. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA and use of a government dam. As noted, the Lake Shelbyville Project will occupy about 3.24 acres of federal land administered by the Corps. The Commission does not assess a land use charge for a licensee's use of federal lands adjoining or pertaining to federal dams or other structures.[29] Rather, it assesses the charge for the use of a government dam.[30]

B. Exhibit F and G Drawings

65. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Article 202 requires the filing of these drawings.

C. Amortization Reserve

66. The Commission requires that, for original licenses for major projects, non-municipal licensees must set up and maintain an amortization reserve account after the first 20 years of operation of the project under license. Article 203 requires the establishment of the account.

D. Headwater Benefits

67. Some projects directly benefit from headwater improvements constructed by other licensees, the United States, or permittees. Article 204 requires the licensee to reimburse such entities for these benefits as such time as they are assessed.

E. Project Financing

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[29] 18 C.F.R. § 11.2(a) (2013).

[30] *Id.* § 11.3.

68. To ensure that there are sufficient funds available for project construction, operation, and maintenance, Article 205 requires the licensee to file for Commission approval documentation of project financing for the construction, operation, and maintenance of the project at least 90 days before starting any construction associated with the project.

F. Use and Occupancy of Project Lands and Waters

69. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 412 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.

G. Start of Construction

70. Article 303 requires the licensee to commence construction of the project works within two years from the issuance date of the license and complete construction of the project within five years from the issuance date of the license.

71. Section 13 of the FPA requires the licensee to commence construction within two years from the issuance date of the license, which deadline may be extended once but no longer than for two additional years.[31] Furthermore, the licensee must obtain all of the necessary approvals from the Corps and the Commission prior to the start of project construction.[32] Therefore, the burden is on the licensee to obtain these approvals and commence construction within the time frames required under section 13 and as specified in this license. The licensee is expected to work diligently with the Corps and other relevant entities to secure the necessary approvals to allow it to timely commence project construction and pursue it to completion.

H. Review of Final Plans and Specifications

[31] 16 U.S.C. § 806 (2012). Under FPA section 13, failure to timely commence project construction will result in termination of the license.

[32] *See, e.g.*, Article 206, documentation of project financing; Article 304, approval of contract plans and specifications; Article 309, Corps' approval of facility design and construction; Article 314, Corps' approval of project operation plan; and Article 315, Corps' written approval of construction plans.

72. Article 304 requires the licensee to provide the Commission's D2SI-Chicago Regional Engineer with approved cofferdam and deep excavation construction drawings.

73. Article 305 requires the licensee to provide the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer with final contract drawings and specifications—together with a supporting design report consistent with the Commission's engineering guidelines as well as a plan for a quality control and inspection program, a temporary emergency action plan, and a soil erosion and sediment control plan.

74. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 306 provides for the filing of these drawings.

75. Article 307 requires the licensee to submit a Public Safety Plan for the project to the Commission's D2SI-Chicago Regional Engineer.

76. To demonstrate awareness of the roles and responsibilities of project owners and staff for the safety of the project, Article 308 requires the licensee to submit a Project Owner's Dam Safety Program to the Commission's D2SI-Chicago Regional Engineer.

I. Board of Consultants

77. The license application and exhibit drawings show the construction of a 575-foot-long, 12-foot-diameter penstock extending from a new 13-foot-diameter bifurcation on the existing West Outlet Structure across the west spillway bay, through or over the existing west spillway training wall and embankment, and extending to the new powerhouse. The location of the penstock in the spillway is not clear, and it is also unclear how its installation either through or over the existing embankment will impact the Corps' existing structures and ability to fulfill its flood control mission. As a result of these uncertainties, Article 302 requires a Board of Consultants to oversee the design and construction of the project. Prior to being allowed to start construction, the licensee needs to clearly explain the penstock alignment and address the following issues:

a. If additional measures are required so that the construction of such features as the bifurcation of the West River Outlet structure, the penstock in the west spillway bay, and the powerhouse will not affect the Corps' operations and flood control responsibilities during construction;

b. If stability of the Corps' spillway structure will be negatively impacted by the new project features;

c. The effect on the spillway discharge capacity by the placement of the penstock across the west spillway bay and how the penstock will be safely anchored to resist spillway flows.

d. The extent of embankment excavation required and any impacts to filter zones, seepage collection systems, or other current monitoring systems thereby.

e. The effect of penstock supports on the embankment structure and slope stability.

f. Measures to prevent differential settlement of the penstock, particularly between the spillway and the adjacent embankment.

g. The possibility of penstock leakage adversely affecting the earth embankment.

h. The possibility of powerhouse discharges limiting spillway releases or undermining the spillway chute.

78. These issues are substantial and need to be addressed to the satisfaction of the Commission, Corps, and Board of Consultants, prior to submittal of contract plans and specifications. It is possible these issues may only be resolved by making substantial changes to the project design and alignment. For this reason, the licensee must submit a design report to the Commission and Corps within six months from the date of this license that addresses the above issues (Article 301). If the report indicates that changes to the authorized project features are needed, then at that time the licensee must also request from the Commission for a determination on the need to amend the license.

J. Conditions for Projects at Corps Dams

79. Pursuant to a 2011 Memorandum of Understanding between the Commission and the Department of the Army,[33] seven special articles are included in licenses for hydroelectric projects to be developed at Corps facilities. The articles are incorporated in this license as Articles 309 through 315.

STATE AND FEDERAL COMPREHENSIVE PLANS

[33] Memorandum of Understanding between United States Army Corps of Engineers and Federal Energy Regulatory Commission on Non-federal Hydropower Projects, March 2011.

80. Section 10(a)(2)(A) of the FPA,[34] requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.[35] Under section 10(a)(2)(A), federal and state agencies filed seven comprehensive plans that address various resources in Illinois. Staff reviewed all seven of the comprehensive plans, because all of them are relevant to this project.[36] No conflicts were found.

SAFE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE PROJECT

81. Staff reviewed Shelbyville Hydro's preliminary plans to build the project as described in the license application. The project will be safe when constructed, operated, and maintained in accordance with the Commission's standards and provisions of this license.

NEED FOR POWER

82. To assess the need for power, staff examined the needs in the operating region where the project will be located. The project will be located in the Midwest Independent System Operator (MISO) assessment area of the North American Electric Reliability Corporation (NERC). According to NERC's most recent 2012 forecast for the MISO assessment area, total internal demand is projected to grow at an annual rate of 1.05 percent from 2012 through 2022. Staff concludes that the project's power, low cost, and contribution to the region's diversified generation mix will help meet a need for power in the region.

PROJECT ECONOMICS

83. In determining whether to issue a license for a 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 Corp.*,[37] the Commission uses current costs to compare the costs of the project and likely alternative power with no

[34] 16 U.S.C. § 803(a)(2)(A) (2012).

[35] Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2013).

[36] The list of applicable plans can be found in section 5.5 of the environmental assessment for the project.

[37] 72 FERC ¶ 61,027 (1995).

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.

84. In applying this analysis to the Lake Shelbyville Project, three options have been considered: no action, Shelbyville Hydro's proposal, and the project as licensed herein. Under the no action alternative, the project would not be built. As proposed by Shelbyville Hydro, the levelized annual cost of constructing and operating the Lake Shelbyville Project is $2,697,760, or $132.89/megawatt-hour (MWh). The proposed project would generate an average of 20,300/MWh of energy annually. When the estimate of average generation is multiplied by the alternative power cost of $89.22/MWh,[38] the total estimated value of the project's power is $1,811,166 in 2013 dollars. To determine whether the proposed project is economically beneficial, the project's cost is subtracted from the value of the project's power.[39] Therefore, in the first year of operation, the project would cost $886,594, or $43.67/MWh, more than the likely alternative cost of power.

85. As licensed herein with staff measures, the levelized annual cost of constructing and operating the project would be about $2,699,010, or $132.96/MWh. Based on the same amount of estimated average generation of 20,300/MWh as proposed, the project would produce power valued at $1,811,166 when multiplied by the $89.22/MWh value of the project's power. Therefore, in the first year of operation, project power would cost $887,844, or $43.74/MWh, more than the likely cost of alternative power.

86. 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 online.

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[38] The alternative power cost of $89.22/MWh is based on a $70/MWh energy rate and a $158/kW capacity rate assuming the project would have a dependable capacity of 2.47 MW as stated on page B-2 of the application.

[39] Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA issued June 28, 2013.

87. Although this analysis shows that the project as licensed herein would cost more to operate than our estimated cost of alternative power, it is the applicant who must decide whether to accept this license and any financial risk that entails.

88. Although staff does not explicitly account for the effects 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 or not, and under what conditions, to issue a license.

COMPREHENSIVE DEVELOPMENT

89. Sections 4(e) and 10(a)(1) of the FPA[40] require the Commission to give equal consideration to the 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 shall 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.

90. 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 Lake Shelbyville Project as described in this order would 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 this license.

91. Based on an independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, I have selected the proposed Lake Shelbyville Project, with the staff-recommended measures, and find that it is best adapted to a comprehensive plan for improving or developing the Kaskaskia River.

92. This alternative was selected because: (1) issuance of an original license will serve to provide a beneficial and dependable source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 6.8 MW of electric

[40] 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

capacity comes from a renewable resource that does not contribute to atmospheric pollution.

LICENSE TERM

93. Section 6 of the FPA,[41] provides that original licenses for hydropower projects shall be issued for a period not to exceed 50 years. It is Commission policy to issue a 50-year license for a project located at a federal dam.[42] Accordingly, this license is issued for a term of 50 years.

The Director orders:

(A) This license is issued to Shelbyville Hydro LLC (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Lake Shelbyville 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 these lands, enclosed by the project boundary shown by Exhibit G filed October 28, 2011.

Exhibit G Drawing	FERC No. 13011-	Description
Sheet G-1	4	Project Lands and Boundary

(2) Project works consisting of: (1) a trashrack with 4-inch spacing integrated into the Corps' existing 9-foot-wide by 15-foot-tall west intake structure; (2) a steel liner installed in the Corps' existing west outlet chamber; (3) a 13-foot-diameter bifurcation chamber[43] and river release valve, which can be opened to pass excess flows into the

[41] 16 U.S.C. § 799 (2012).

[42] *See City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).

[43] The bifurcation chamber consists of a river release valve that allows flows to be passed three ways in order to match the outlet capacity of the Corps' existing outlet structure: (1) through the project penstock; (2) through the river release valve into the stilling basin; or (3) a combination of both.

stilling basin, installed at the existing west outlet structure; (4) a 575-foot-long, 12-foot-diameter steel penstock extending from the bifurcation chamber; (5) a 60-foot-long, 50-foot-wide, 68-foot-high concrete powerhouse containing a 6.8-MW Kaplan turbine-generator; (6) an approximately 24.5-foot-wide, 30-foot-long, 6.7-foot-tall draft tube; (7) a 105-foot-wide, 49-foot-long tailrace angled at a slope of 8 horizontal to 1 vertical; (8) a 12.47-kilovolt, 407-foot-long buried transmission line connecting the project to an existing Shelby Electric Cooperative substation located 900 feet downstream of the dam; (9) a four-foot by six-foot transformer pad located adjacent to the powerhouse; (10) a 300-foot-long access road that would pass to the west of the powerhouse; (11) a parking lot on the west side of the powerhouse; and (12) appurtenant facilities.

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

Exhibit A: The following section of Exhibit A filed on October 28, 2011:

Section (2), pages A-3 through A-5, entitled "Proposed Project Features," describing the mechanical, electrical, and transmission equipment within the application for license.

Exhibit F: The following Exhibit F drawings filed on October 28, 2011:

Exhibit F Drawing	FERC No. 13011-	Description
Sheet F-1	1	General Layout
Sheet F-2	2	Powerhouse Plan and Section Views
Sheet F-3	3	Upstream Elevation/ Powerhouse Elevation

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

(D) This license is also subject to the articles set forth in Form L-2 (Oct. 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting

Lands of the United States" (*See* 54 F.P.C. 1792 *et seq*.), as reproduced at the end of this order, and the following additional articles:

Article 201. *Administrative Annual Charges*. The licensee shall pay the United States the following annual charges, as determined in accordance with the provisions of the Commission's regulations in effect from time to time:

(a) effective as of the date of commencement of project construction, to reimburse the United States for the cost of administration of Part 1 of the Federal Power Act. The authorized installed capacity for that purpose is 6.8 megawatts.

(b) to recompense the United States for the use of a government dam.

Article 202. *Exhibit Drawings.* Within 45 days of the date of issuance of the license, the licensee shall convert all drawings to black and white and file the approved exhibit drawings in aperture card and electronic file formats.

(a) Four sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number (i.e., P- 13011-1 through P-13011-2) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, G-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards along with form FERC-587 shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI) Chicago Regional Office. The remaining set of aperture cards (Exhibit G only) and a copy of Form FERC-587 shall be filed with the Bureau of Land Management (BLM) office at the following address:

Bureau of Land Management

Branch of Lands (ES-930)

7450 BOSTON BLVD

Springfield, VA 22153

ATTN: FERC Withdrawal Recordation

(b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be

filed with the D2SI Chicago Regional Office. Exhibit F drawings must be separated from other project exhibits and identified as Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. § 388.113(c) (2013). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-13011-1, G-1, Project Boundary, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file

FILE TYPE – Tagged Image File Format (TIFF), CCITT Group 4

RESOLUTION – 300 dpi desired (200 dpi min)

DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)

FILE SIZE – less than 1 MB desired

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). The points must be arranged in a triangular format for GIS geo-referencing the project boundary drawing to the polygon data, and must be based on a standard map coordinate system. The spatial reference for the drawing (i.e., map projection, map datum, and units of measurement) must be identified on the drawing and each reference point must be labeled. In addition, each project boundary drawing must be stamped by a registered land surveyor.

(c) The licensee shall file two separate sets of the project boundary data in a georeferenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format) with the Secretary of the Commission, ATTN: OEP/DHAC. The filing shall include both polygon data and all reference points shown on the individual project boundary drawings. An electronic boundary polygon data file(s) is required for each project development. Depending on the electronic file format, the polygon and point data can be included in single files with multiple layers. The geo-referenced electronic boundary data file must be positionally accurate to ±40 feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) shall include: FERC Project Number, data description, date of this license, and file extension in the following format [P-13011, boundary polygon/or point data, MM-DD-YYYY.SHP]. The filing must be accompanied by a separate text file describing the spatial reference for the geo-referenced 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 shall include: FERC Project Number, data description, date of this license, and file

extension in the following format [P-13011, project boundary metadata, MM-DD-YYYY.TXT].

In addition, for those projects that occupy federal lands, a separate georeferenced polygon file(s) is required that identifies transmission line acreage and non-transmission line acreage affecting federal lands. The file(s) must also identify each federal owner (e.g., BLM, Forest Service, 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 geo-referenced electronic file format, the polygon, point, and federal lands data can be included in a single file with multiple layers.

Article 203. *Amortization Reserve.* Pursuant to section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operations under the license, in excess of the specified rate of return per annum on the net investment shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall 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 is directly benefited by the construction work of another licensee, a permittee, or of the United States on a storage reservoir or other headwater improvement, the licensee shall reimburse the owner

of the headwater improvement for those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the Commission's regulations.

Article 205. *Documentation of Project Financing*. At least 90 days before starting construction, the licensee shall file with the Commission, for approval, the licensee's documentation for the project financing. The documentation must show that the licensee has acquired the funds, or commitment for funds, necessary to construct the project in accordance with this license. The documentation must include at a minimum financial statements, including a balance sheet, income statement, and a statement of actual or estimated cash flows over the license term, which provide evidence that the licensee has sufficient assets, credit, and projected revenues to cover project construction, operation, and maintenance expenses, and any other estimated project liabilities and expenses.

The financial statements must be prepared in accordance with generally accepted accounting principles and signed by an independent certified public accountant. The licensee shall not commence project construction associated with the project before the filing is approved.

Article 301. *Design Review*. Within 6 months from the date of license issuance, the licensee must submit to the Commission, the U.S. Army Corps of Engineers (Corps), and the licensee's Board of Consultants a report clarifying the project design and addressing feasibility issues associated with the design. At a minimum, the design report must explain: (a) if additional measures are required so that the construction of such features as the bifurcation of West River Outlet structure, the penstock in the west spillway bay, and the powerhouse will not affect the Corps' operations and flood control responsibilities during construction; (b) if the stability of the Corps' spillway structure will be negatively impacted by the new project features; (c) the effect on the spillway discharge capacity by the location of the penstock across the west spillway bay and how the penstock will be safely anchored to resist spillway flows; (d) the ability of the penstock to adequately resist impact from spillway flows; (e) the extent of embankment excavation and any impacts to filter zones, seepage collection systems, or other current monitoring systems; (f) the effect of penstock supports on the embankment structure and slope stability; (g) measures to prevent differential settlement of the penstock particularly between the spillway and the adjacent embankment; (h) the possibility of penstock leakage adversely affecting the earth embankment; (i) the possibility of powerhouse discharges limiting spillway releases or undermining the spillway chute. The licensee shall not proceed with the final design of the project until the Commission, the Corps, and the licensee's Board of Consultants has reviewed the report and found the above issues were adequately addressed to proceed with final design. If the report indicates that significant changes to the authorized project features are needed, then at that time the licensee must also request from the Commission a determination of need to amend the license.

Article 302. *Board of Consultants*. The licensee shall retain a Board of three or more qualified independent engineering consultants, including an engineering geologist, a geotechnical engineer and a structural engineer, to review the feasibility issues, final design, specifications, and construction of the project for safety and adequacy. The names and qualifications of the Board members shall be submitted to the Director, Division of Dam Safety and Inspections (D2SI), for approval, with a copy to the Commission's D2SI-Chicago Regional Engineer.

Among other things, the Board shall assess: (l) the geology of the project site and surroundings; (2) the design, plans and specifications, and construction of the dam excavation and rebuild, intakes/outlets, tunnels, penstocks, powerhouse, electrical and mechanical equipment; (3) instrumentation; (4) the construction quality control inspection program; (5) construction procedures and progress; and (6) project operation.

Before each Board meeting, allowing sufficient time for review, the licensee shall furnish the following items to the Board: (1) a statement showing the specific level of review to be performed by the Board; (2) an agenda; (3) a list of items for discussion; (4) significant events in the design and construction that have occurred since the last Board meeting; (5) drawings; and (6) documentation showing details and analyses of the design and construction features to be discussed. At the same time, the licensee shall submit one copy of these items to the D2SI-Chicago Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Director, D2SI).

Within 30 days after each Board meeting, the licensee shall file with the Commission copies of the Board's report and a statement of intent to comply with the Board's recommendations, or a statement identifying a plan to resolve the issue(s). The Board's review comments shall be submitted prior to or simultaneously with the submission of the final contract drawings, specifications, and supporting design report.

The licensee shall also file with the Commission copies of the Board's final report within one year of completing construction. The final report shall contain a statement indicating the Board's satisfaction with the construction, safety, and adequacy of the project structures and that all Potential Failure Modes have been identified and fully developed.

Article 303. *Start of Construction*. The licensee shall commence construction of the project works within 2 years from the issuance date of the license and shall complete construction of the project within 5 year from the issuance date of the license.

Article 304. *Cofferdam Construction Drawings and Deep Excavations*. Should construction require cofferdams or deep excavations, the licensee shall: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the

start of construction; and (2) shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam and deep excavation construction drawings and specifications, and the letters of approval.

Article 305. *Contract Plans and Specifications*. At least 60 days prior to start of construction, the licensee shall submit one copy of its final contract plans and specifications and supporting design report to the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI-Chicago Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 306. *As-built Exhibits*. Within 90 days of completion of construction of the facilities authorized by this license, the licensee shall file for Commission approval, revised Exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer; the Director, D2SI; and the Director, Division of Hydropower Administration and Compliance.

Article 307. *Public Safety Plan*. Within 60 days from the issuance of this order, the licensee shall submit one copy to the Commission’s Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission’s Director, D2SI) of a Public Safety Plan. The plan shall include an evaluation of public safety concerns at the project site, including designated recreation areas, and assess the need for the installation of safety devices or other safety measures. The submitted plan shall include a description of all public safety devices and signage, as well as a map showing the location of all public safety measures. The plan shall be developed in coordination with the Corps. For guidance on preparing public safety plans, the licensee can review the Guidelines for Public Safety at Hydropower Projects on the FERC website.

Article 308. *Project Owner’s Dam Safety Program*. Within 90 days from the issuance date of the license, the licensee shall submit to the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer, a Project Owner's Safety Program which at a minimum shall demonstrate a clear acknowledgement of the

project owner's responsibility for the safety of the project, include an outline of the roles and responsibilities of the dam safety staff, and confirm access of the dam safety official to the Chief Executive Officer. For guidance on preparing a Project Owner's Dam Safety Program, the licensee should reference the information posted on the FERC website.

Article 309. *Facility Design and Construction*. The design and construction of those permanent and temporary facilities, including reservoir impounding cofferdams and deep excavations, that would be an integral part of, or that could affect the structural integrity or operation of the Government project shall be done in consultation with and subject to the review and approval of the Corps' District Engineer. The Corps' review of the cofferdams will be in addition to the licensee's review and approval of the final plans and shall in no way relieve the licensee of responsibility and liability regarding satisfactory performance of the cofferdams.

Within 90 days from the issuance date of the license, the licensee shall furnish the Corps and the Commission's Division of Dam Safety and Inspections-Chicago Regional Engineer, a schedule for submission of design documents and the plans and specifications for the project. If the schedule does not afford sufficient review and approval time, the licensee, upon request of the Corps, shall meet with the Corps and the Commission's staff to revise the schedule accordingly.

Article 310. *Review of Contractor Designs*. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations, other than those approved according to Article 309, prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of any cofferdams or deep excavations, the licensee shall submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, D2Sl), of the approved cofferdam and deep excavation construction drawings and specifications, and the letters of approval.

Article 311. *No Claim*. The licensee shall have no claim under this license against the United States arising from the effect of any changes made in the operation or reservoir levels of the U.S. Army Corps of Engineers project.

Article 312. *Agreement with Corps*. The licensee shall within 90 days from the issuance date of the license, enter into an agreement with the U.S. Army Corps of Engineers (Corps) to coordinate its plans for access to and site activities on lands and property administered by the Corps so that the authorized purposes, including operation of the Federal facilities, are protected. In general, the agreement shall not be redundant with the Commission's requirements contained in this license, shall identify the facility, and the study and construction activities, as applicable, and terms and conditions under

which studies and construction will be conducted. The agreement shall be mainly composed of reasonable arrangements for access to the Corps site to conduct studies and construction activities, such access rights to be conditioned by the Corps as may be necessary to protect the federally authorized project purposes and operations. Should the licensee and the Corps fail to reach an access agreement, the licensee shall refer the matter to the Commission for resolution.

Article 313. *Periodic and Continuous Inspections by the Corps*. The construction; operation, and maintenance of the project works that, in the judgment of the U.S. Army Corps of Engineers (Corps) may affect the structural integrity or operation of the Corps project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation and maintenance deficiencies or difficulties detected by the Corps inspection shall be immediately reported to the Division of Dam Safety and Inspections (D2SI)-Chicago Regional Engineer. Upon review, the D2SI-Chicago Regional Engineer shall refer the matter to the licensee for appropriate action. In cases when construction, operation, or maintenance practices or deficiencies may create a situation posing imminent danger to the structural integrity and safety of the Corps project, the Corps inspector has the authority to stop construction or maintenance while awaiting the resolution of the problem. The licensee shall immediately inform the D2SI-Chicago Regional Engineer of the circumstances surrounding the cessation of construction, operation, or maintenance activities. The licensee shall not resume construction, operation, or maintenance activities until notified by the D2SI-Chicago Regional Engineer that the problem or situation has been resolved.

Article 314. *Regulating (or Operating) Plan*. The licensee shall at least 60 days prior to start of construction, submit for approval a regulating plan to the U.S. Army Corps of Engineers (Corps), describing (a) the designed mode of hydropower operation, (b) reservoir flow diversion and regulation requirements for operation of the Corps project during construction as established by the Corps, and (c) integration of the operation of the hydroelectric facility into the Corps' emergency action plan. In addition, the licensee, prior to start of power plant operation, shall enter into an operating Memorandum of Agreement (MOA) with the Corps describing the detailed operation of the powerhouse acceptable to the Corps. The MOA shall specify any restrictions needed to protect the primary purposes of the Corps project for navigation, recreation, water quality, and flood control. The Commission's Division of Dam Safety and Inspection's Chicago Regional Engineer shall be invited to attend meetings regarding the agreement. The MOA shall be subject to revision by mutual consent of the Corps and licensee as experience is gained by actual project operation. Should the licensee and the Corps fail to reach an agreement, the matter will be referred to the Director, Office of Hydropower Licensing for resolution. Copies of the regulating plan and signed MOA between the Corps and the licensee and any revision thereof shall be furnished to the Director, Office of Hydropower Licensing and the Regional Engineer.

Article 315. *Corps' Written Approval*. The licensee shall file with the Commission, and provide two copies to the Commission's Division of Dam Safety and Inspections (D2SI)-Chicago Regional Office, all correspondence between the licensee and the Corps. The D2SI-Chicago Regional Engineer shall not authorize construction of any project work until the Corps' written approval of construction plans and specifications has been received by the D2SI-Chicago Regional Engineer.

Article 401. *Run-of-Release Operation*. The licensee shall operate the project in a run-of-release mode, meaning that the licensee shall not deviate from the flow constraints, including flow releases, established by the U.S. Army Corps of Engineers (Corps) according to Article 314, *Regulating (or Operating) Plan*.

Run-of-release operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, or as directed by the Corps to accommodate the authorized purpose for the Corps' facilities. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. *Stream Bank Stability Monitoring Plan*. Within one year of license issuance, the licensee shall file with the Commission for approval, a plan to monitor the bank stability of the Kaskaskia River between the project tailrace and the Illinois Route 16 bridge. Monitoring results shall provide information necessary to distinguish bank erosion resulting from project operations from erosion resulting from other processes, and monitoring results shall also identify any adverse effects from project operations on stream-bank stability.

The plan shall include, at a minimum: (1) a description of the methods that will be used to monitor bank stability to determine the extent and magnitude of the erosion occurring during the initial year of project operation; (2) identification of the locations that will be monitored for bank stability; (3) a provision to prepare and file an annual report of bank stability monitoring results, including recommendations to address areas of stream-bank instability developed after consultation with the Illinois Environmental Protection Agency (Illinois EPA), Illinois Department of Natural Resources (Illinois DNR), and the U.S. Army Corps of Engineers (Corps); and (4) an implementation schedule.

The bank stability monitoring plan shall be developed after consultation with the Illinois EPA, Illinois DNR, and the Corps. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the

plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific reasons.

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

Article 403. *Hazardous Substances Spill Prevention and Cleanup Plan*. The Hazardous Spill Prevention and Cleanup Plan, filed October 28, 2011, as Appendix E-2 of the Final License Application, is approved and made part of this license. The plan may not be amended without prior Commission approval. Upon license issuance the licensee shall implement the plan.

The licensee shall submit a monthly report during construction to the Commission, U.S. Army Corps of Engineers (Corps), the Illinois Department of Environmental Quality. The report must include a description of the location of spill cleanup equipment and the location, type, quantity of oil, and other hazardous substance stored on-site, and corrective actions taken for spills. If a spill occurs during project operation, the licensee shall submit a report to the Commission, the Corps, the Illinois Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Illinois Department of Natural Resources, and the National Spill Response Center within 24 hours after any spill during project operations to inform these agencies of the nature, time, date, location, and action taken. The licensee shall file a detailed follow-up report with the Commission within 15 days of the spill, including measures to prevent a recurrence in the future.

The Commission reserves the right to modify the plan and the associated requirements of this article in order to further protect environmental resources at the project from hazardous substance spills.

Article 404. *Dissolved Oxygen Monitoring and Management Plan*. The Dissolved Oxygen Monitoring and Management Plan filed October 28, 2011, as Appendix E-3 of the Final License Application, is approved and made part of this license with the following additional provisions: (1) notify the Commission, Illinois Environmental Protection Agency (Illinois EPA), and the U.S. Army Corps of Engineers (Corps) in the event that dissolved oxygen falls below standards 5 milligrams per liter (mg/L) from March through July and 3.5 mg/L from August through February as soon as possible, but no later than 10 days after each such incident; and (2) within 60 days of the incident, file a report including any proposed or recommended corrective actions made by the Corps and Illinois EPA to prevent future deviations from occurring. As part of the plan, the licensee shall submit annual operational water quality reports by March 31 following each monitoring year to the Commission and Illinois EPA that provide an analysis of the previous year's monitored data, including tabular and graphical

representation of daily minimum DO concentrations, flow and power generation levels, and any aeration measures implemented.

The licensee shall allow a minimum of 30 days for the Illinois EPA and the Corps to comment and to make recommendations before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project specific reasons.

The Commission reserves the right to modify the plan and the associated requirements of this article in order to further protect environmental resources at the project.

Article 405. *Cofferdam Fish Salvage Plan*. At least 90 days prior to the start of project construction of the cofferdams or dewatering of any areas, the licensee shall file, with the Commission for approval, a cofferdam fish salvage plan to be implemented during construction activities.

The plan shall include, but not necessarily be limited to, the following: (1) procedures for removing any fish prior to draining the area enclosed by the cofferdam; (2) procedures for relocating any entrapped fish during pumping activities safely to the river; and (3) procedures for screening the pump intake.

The licensee shall prepare the plan after consultation with the U.S. Army Corps of Engineers, Illinois Department of Natural Resources, and the U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments area accommodated by the plan. The licensee shall 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 shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. In-water construction activities shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. *Zebra Mussel Monitoring and Control Plan*. The Zebra Mussel Monitoring and Control Plan filed October 28, 2011, as E-4 in the Final License Application, is approved and made part of this license. The plan may not be amended without prior Commission approval. Upon license issuance, the licensee shall implement the plan.

Article 407. *Revegetation Management Plan*. The Revegetation Management Plan, filed October 28, 2011 as Appendix E-5 in the Final License Application, is approved and made part of this license. The plan may not be amended without prior Commission approval. Upon license issuance, the licensee shall implement the plan.

As part of the plan, the licensee must submit annual progress reports to the Commission and the U.S. Army Corps of Engineers by December 31 of each year revegetation measures are implemented, describing vegetation growth and management, and progress reports describing general vegetation inventory once every five years after vegetation is established.

The Commission reserves the right to require changes to the plan based on information contained in the report and any other available information. The plan may not be amended without prior Commission approval.

Article 408. *Revised Noxious Weed Management Plan.* At least 90 days prior to the start of project construction, the licensee shall revise, and file with the Commission for approval, the Noxious Weed Management Plan filed on October 28, 2011 as Appendix E-6 in the Final License Application, to include an additional provision to establish, in consultation with the U.S. Army Corps of Engineers (Corps) and Illinois Department of Natural Resources (Illinois DNR), benchmarks for the percentage of noxious weed cover that will trigger the need for control measures.

The licensee shall revise the plan after consultation with the Corps and Illinois DNR, and file the revised plan with the Commission, for approval, at least 90 days prior to the start of construction. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed report after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments area accommodated in the plan. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

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

Article 409. *Revised Construction Recreation Plan.* At least 90 days prior to the start of project construction, including use of construction staging areas, the licensee shall revise, and file with the Commission for approval, the Construction Recreation Plan filed on October 28, 2011, as Appendix E-8 of the Final License Application, to include the following additional provisions: (1) a description of public safety measures to be

implemented during project construction; (2) an implementation schedule for temporary closures or restricted access of recreation areas impacted by construction, specifying and minimizing the length of time that closures and access restrictions occur; and (3) a description of any temporary facilities that would be provided if permanent recreation facilities (e.g., restrooms or parking) or access roads are closed during construction.

The licensee shall revise the plan after consultation with the U.S. Army Corps of Engineers and the Illinois Department of Natural Resources, and file the revised plan with the Commission, for approval, at least 90 days prior to the start of construction. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed report after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments area accommodated in the plan. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

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

Article 410. *FERC Form 80 Exemption*. Upon the effective date of the license, the licensee is exempt from 18 C.F.R. § 8.11, the filing of the Licensed Hydropower Development Recreation Report (Form 80), for the Lake Shelbyville Project.

Article 411. *Protection of Previously Undiscovered Cultural Resources.* If the licensee discovers previously unidentified cultural resources or human remains during the course of constructing, maintaining, or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the resource and consult with the Illinois State Historic Preservation Officer (Illinois SHPO), the Kickapoo Tribe of Oklahoma, and the Peoria Tribe of Indians of Oklahoma to determine the need for any cultural resource studies or measures. If no studies or measures are needed, the licensee shall file with the Commission documentation of its consultation with the Illinois SHPO, the Kickapoo Tribe of Oklahoma, and the Peoria Tribe of Indians of Oklahoma immediately.

If a discovered cultural resource is determined to be eligible for the National Register of Historic Places (National Register), the licensee shall file for Commission approval a historic properties management plan (HPMP) prepared by a qualified cultural resource specialist after consultation with the Illinois SHPO, the Kickapoo Tribe of Oklahoma, and the Peoria Tribe of Indians of Oklahoma. In developing the HPMP, the licensee shall use the Advisory Council on Historic Preservation and the Federal Energy

Regulatory Commission's Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects, dated May 20, 2002. The HPMP shall include the following items: (1) a description of each discovered property, indicating whether it is listed in or eligible to be listed in the National Register; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating adverse effects; (4) documentation of consultation; and (5) a schedule for implementing mitigation and conducting additional studies. The Commission reserves the right to require changes to the HPMP.

The licensee shall not resume land-clearing or land-disturbing activities in the vicinity of a cultural resource discovered during construction, until informed by the Commission that the requirements of this article have been fulfilled.

Article 412. *Use and Occupancy.* (a) In accordance with the provisions of this article, the licensee shall 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 shall 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 shall 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 shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall 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 shall: (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 shall file three copies of 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 shall 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 shall 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 shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall 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 shall not unduly restrict public access to project 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 shall 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 shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(E) The licensee shall 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.

(F) 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* (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2013). 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 shall constitute acceptance of this order.

Jeff C. Wright
Director
Office of Energy Projects

Form L-2

(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED MAJOR PROJECT AFFECTING 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 works shall be constructed 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.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in

the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations 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 a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any features or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work 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 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 of 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 state 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 locations 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 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 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 Commission may prescribe for the 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 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 consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, 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. Upon approval of the clearing plan 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 statues and regulations.

Article 21. Timber on lands of the United State 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 22. 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 23. 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 24. 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 25. 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 26. 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 27. 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 28. 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 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 3l, 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 ad opportunity for hearing.

Article 30. 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 31. 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 32. 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.

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