

UNITED STATES OF AMERICA 132 FERC ¶ 62,119
FEDERAL ENERGY REGULATORY COMMISSION

Bowersock Mills and Power Company
Bowersock Mills and Power Company

Project No. 13526-002
Project No. 2644-001

ORDER ISSUING ORIGINAL LICENSE AND TERMINATING EXEMPTION
FROM LICENSE

(August 19, 2010)

INTRODUCTION

1. On February 8, 2010, Bowersock Mills and Power Company (Bowersock), filed, pursuant to Part I of the Federal Power Act (FPA),¹ an application for an original license to construct, operate, and maintain the proposed 6.5-megawatt (MW) Expanded Kansas River Hydropower Project No. 13526 (Expanded Kansas River Project). The proposed project would be located at an existing dam on the Kansas River near Lawrence, in Douglas County, Kansas.² The project would not occupy federal lands. The average annual generation of the proposed project would be 32,726 megawatt-hours (MWh). As discussed below, I am issuing an original license for the project.

BACKGROUND

2. The proposed project would operate using an existing powerhouse from the exempted Kansas River Project No. 2644,³ together with a proposed new

¹ 16 U.S.C. §§ 797(e) and 808 (2006).

² The project is located on the Kansas River, which the Commission found to be a navigable waterway of the United States. 57 FPC 1787 (1977).

³ The Commission is authorized to exempt, from the licensing requirements of Part I of the FPA, small hydroelectric projects with an installed capacity of 5 megawatts (MW) or less that use for the generation of electricity either an existing dam (i.e., one in existence on or before July 22, 2005) or a “natural water feature” without the need for any dam or impoundment. See sections 405 and 408 of the Public Utility Regulatory Policies Act (PURPA) of 1978, 16 U.S.C. §§ 2705 and 2708 (2006). Exemptions are subject to the mandatory conditioning authority of state and federal fish and wildlife agencies with respect to the mitigation of project impacts on fish and wildlife resources.

(continued)

powerhouse. Bowersock plans to surrender its exemption upon the issuance of a license for the expanded project.

3. Licensing of the project was initiated on October 23, 2009, when Bowersock filed with the Commission a Pre-Application Document (PAD) and a Notice of Intent (NOI) to license the Expanded Kansas River Project using the Traditional Licensing Process (TLP). The Commission issued a Notice of Commencement of Proceeding and approval of the TLP on November 11, 2009.
4. Commission staff determined that the issues that needed to be addressed in its Environmental Assessment (EA) had been adequately identified during the pre-filing period for the application, which included a public meeting and site visit conducted by Bowersock on August 13, 2009, and no new issues were likely to be identified through additional scoping. No comments were filed in response to the Commission's March 3, 2010 notice stating the Commission intended to waive scoping. On April 19, 2010, the Commission notified Bowersock that further scoping would not be required.
5. Bowersock filed its license application on February 8, 2010. On April 16, 2010, the Commission published public notice in the *Federal Register*, accepting the license application; soliciting motions to intervene and protests; and soliciting comments, final recommendations, terms and conditions, and prescriptions. In response to the notice, the U.S. Department of the Interior (Interior) filed a motion to intervene on June 11, 2010, that was not in opposition to the project.⁴ Interior, on June 10, 2010, also requested a reservation of authority to prescribe fishways. No other comments or recommendations were received.
6. An EA was prepared by Commission staff and is being issued concurrently with this order.
7. The motion to intervene has been fully considered in determining whether, and under what conditions, to issue this license.

On November 15, 1985, the Commission issued Bowersock Mills and Power Company an exemption from licensing for Project No. 2644-001. *See* 33 FERC ¶ 62,209 (1985).

⁴ The motion to intervene was timely and unopposed; therefore, it was automatically granted under Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c)(1) (2010).

PROJECT DESCRIPTION

A. Project Area

8. The proposed project would be located on the Kansas River at River Mile 54. The Kansas River has a total length of 170 river miles starting at the confluence of the Republican River and Smokey Hill River in Junction City, Kansas, and ending at its confluence with the Missouri River in Kansas City, Missouri. Flows in the Kansas River are primarily regulated by three U.S. Army Corps of Engineers (Corps) reservoirs located in the headwaters of the Kansas River (i.e. Perry Lake, located 17 miles northwest of the proposed project on the Delaware River; Tuttle Creek Lake, located 84 miles west of the proposed project on the Big Blue River near Manhattan, Kansas; and Milford Lake, located 35 miles west of the proposed project on the Republican River near Junction City, Kansas). The Kansas River at the proposed project is confined by a levee on the north side of the river that was constructed by the Corps in 1953. The levee has a top elevation 830 feet National Geodetic Vertical Datum (NGVD) and is maintained by the city of Lawrence. The south side of the river is contained by soil banks up to the high water mark at elevation 816 to 818 feet NGVD.

9. Water uses in the project area include domestic water supply for the city of Lawrence, and cooling water for the 566-MW, coal-fired, Westar Power Plant (Westar), which is located 3.2 miles upstream of the Bowersock dam. Westar can withdraw up to 44.5 cubic feet per second (cfs) for cooling purposes. Lawrence maintains a municipal water intake for the Kaw Water Treatment Plant (Kaw), which is located approximately 2,700 feet upstream of the Bowersock dam. Kaw can divert up to 22.5 cubic feet per second (cfs) when the project reservoir (i.e. Bowersock Millpond) is at the level of the crest of the dam, and up to 34.5 cfs when the millpond level is higher.

B. Existing Project

Existing Exempted Facilities

10. The existing Bowersock dam and powerhouse currently operate under an exemption from licensing for the Kansas River Project No. 2644. The existing exempted project consists of the 3.3-mile-long, 329-acre Bowersock Millpond at normal water surface elevation 812 feet NGVD, and the 665-foot-long, 17-foot-high Bowersock dam with a crest elevation of 808 feet NGVD. The dam is topped by 150 feet of 4-foot-high Obermeyer steel flashboards located on the south end of the dam, 400 feet of 4-foot-high wooden flashboards at the midsection of the dam, and a 120-foot-long gated spillway at the north end of the dam. The gated spillway consists of seven steel vertical lift gates having a hydraulic capacity of

2,000 cfs. The project also includes the south powerhouse containing seven turbine/generator units having a hydraulic capacity of 2,300 cfs, and installed capacity of 2.14 MW which generates about 11,448 MWh annually; and a 535-foot-long, 2.3-kV transmission line leading from the powerhouse to a substation on the south bank owned by Westar Energy.

Existing Recreational Facilities

11. There are no recreation facilities provided by the exempted project.

Current Operation of Exempted Project

12. The Bowersock dam was originally constructed in 1874 and serves multiple purposes today, including: (1) generating hydroelectric energy at the south powerhouse; (2) reducing stream bed degradation in the upper reaches of the Kansas River; (3) protecting the existing Kansas Department of Transportation bridge piers, located immediately upstream of the dam, from erosion; and (4) creating the Bowersock Millpond which is utilized for public recreation and a source of water for the city of Lawrence's municipal water needs.

13. The exempted project operates in a run-of-river mode, where water levels in the Bowersock Millpond are maintained near the top of 4-foot-high flash boards, at elevation 812 feet NGVD. The impoundment elevations are maintained by wooden flashboards, which are manually raised into position, and steel Obermeyer flashboards, which are operated by a pneumatic system. In addition, flows can be released into a spillway through seven steel gates at the north end of the dam which are raised or lowered manually. The wooden flashboards are designed to collapse when topped by about 6 inches of water, which is equivalent to 7,000 cfs. The wooden flashboards can not be raised again until the river flow is less than 3,500 cfs.

C. Proposed Project, Operation, and Environmental Measures

Proposed Project

14. Bowersock's proposal includes the following features: (1) the 3.8-mile-long, 423-acre Bowersock Millpond at normal water surface elevation 813.5 feet NGVD; (2) the existing 665-foot-long, 17-foot-high timber-crib Bowersock Dam; (3) the existing south powerhouse, containing seven turbine/generator units having an installed capacity of 2.14 MW; (4) a new powerhouse at the north end of the dam which would replace seven existing spillway gates. The new north powerhouse would have four turbine/generator units with an installed capacity of 4.397 MW; (5) 400 feet of new wooden flashboards on the mid-section of the dam to raise the existing flashboards from 4 feet high to 5.5 feet high; (6) 150 feet of

refurbished Obermeyer flashboards consisting of 15 gates, each 10 feet long; (7) a new 20-foot-wide roller gate adjoining the north powerhouse; (8) a new intake flume for the north powerhouse which would be protected by trashracks with 4.5-inch open bar spacing; (9) new recreation facilities including a tailrace fishing deck, a pedestrian footpath, canoe portage trail, canoe put-in, canoe take-out, two kiosks, and associated signage; (10) a new 765-foot-long, 12-kV transmission line which would connect the north powerhouse to an existing 535-foot-long 2.3-kV transmission line at the south powerhouse; and (11) appurtenant facilities. The project would have 11 turbines, a total hydraulic capacity of 5,395 cfs, and generation capacity of 6.5 MW. The project would generate an estimated 32,726 MWh annually which would be sold to a local utility.

Proposed Project Operation

15. The project would be operated in a run-of-river mode, where water levels in the millpond would be maintained near the top of the flashboards at 813.5 feet NGVD, plus or minus 6 inches. The north and south powerhouses would be operated in tandem to maintain the millpond elevation. Maintaining the millpond elevation would be automated and more efficient through placement of water surface monitors at the north powerhouse, and construction of a new roller gate which would be automatically raised or lowered in response to the elevation data. The project would increase the hydraulic capacity (flows through the turbines) from 2,300 cfs to approximately 5,395 cfs.

16. The new automated roller gate, designed to release flows up to 2,600 cfs, would provide greater flexibility in releasing high flows than is possible with the current manually operated gate system, thus reducing the potential for flooding upstream. During high inflows the millpond elevation will be maintained by a combination of flows through the south powerhouse (2,300 cfs), south Obermeyer system (6,424 cfs), north powerhouse (3,084 cfs), and north roller gate (2,600 cfs). Thus, the development could pass up to 14,408 cfs of flows before the millpond elevation would rise. The 5.5-foot-high wooden flashboards would be designed to collapse during periods of high inflows when the water surface elevation rises 6 inches above the top of the flashboards (814 feet NGVD) at approximately 18,000 cfs. It would be possible to raise the fallen flashboards when the river flow drops below 8,500 cfs.

Proposed Environmental Measures

17. Bowersock proposes to: (1) operate the project run-of-river; (2) develop new recreation sites, as identified above, and install two kiosks and signage; and (3) employ best management practices to protect water quality and control sediment and debris during construction.

D. Project Boundary

18. The Expanded Kansas River Project boundary map, filed on July 29, 2010, encloses the Bowersock Millpond, Bowersock dam and spillway, the proposed north and existing south powerhouses, the proposed transmission line and an existing transmission line, and the project tailrace to approximately 100 feet downstream of the dam. The project boundary encloses the proposed recreation sites including the pedestrian footpath, 725-foot-long canoe portage trail, tailrace fishing deck, canoe put-in, and canoe take-out. The project boundary is defined by the 814-foot NGVD contour line elevation,⁵ which allows for the 0.5-foot operation limits proposed by Bowersock.

WATER QUALITY CERTIFICATION

19. 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 a water quality 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

20. On January 29, 2010, the Kansas Department of Health and Environment (Kansas DHE) received a request from Bowersock for a water quality certification (WQC) for the Expanded Kansas River Project. On April 1, 2010, the Kansas DHE issued a WQC for the project with eight conditions.

21. The WQC contains the following measures: (1) post the WQC on site; (2) implement good house keeping practices to manage discarded debris and construction materials; (3) avoid or control the discharge of suspended solids from construction activities and removal of riparian vegetation; (4) develop a storm

⁵ The 814-foot contour line is irregular at the upstream end of the Bowersock Millpond; therefore, the boundary at this location extends from the most upstream section of the 814-foot contour on the north side of the river, and crosses the river to include the mouth of Baldwin Creek on the south side of the river.

⁶ 33 U.S.C. § 1341(a)(1) (2006).

⁷ 33 U.S.C. § 1341(d) (2006).

water pollution prevention plan for construction activities which disturb one acre or more; (5) avoid or control the discharge of nutrients from construction activities; (6) avoid or control the discharge of bacteria from wastewater; (7) avoid or control the discharge of toxic substances such as oil or grease from construction activities; and (8) submit a project water quality protection plan to the Kansas DHE which addresses minimizing disturbance or removal of riparian/wetland areas, proper disposal of solid and human wastes, proper storage of fuels and chemicals, emergency procedures in the event of spills, and stormwater management.

22. All of the WQC conditions are set forth in Appendix A and incorporated into this license by Ordering Paragraph (D).

COASTAL ZONE MANAGEMENT ACT

23. 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 coastal zone management program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

24. Kansas has no coastal zone or CZMA program. Therefore, the project is not subject to a coastal zone program review and no consistency certification is required.

SECTION 18 FISHWAY PRESCRIPTIONS

25. Section 18 of the FPA⁹ provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.

26. By letter filed June 10, 2010, Interior requested that the Commission reserve its authority to prescribe fishways. Consistent with Commission policy, Article 403 of this license reserves the Commission's authority to require such fishways as may be prescribed by Interior for the Expanded Kansas River Project.

⁸ 16 U.S.C. § 1456(c)(3)(A) (2006).

⁹ 16 U.S.C. § 811 (2006).

THREATENED AND ENDANGERED SPECIES

27. Section 7(a)(2) of the Endangered Species Act (ESA) of 1973¹⁰ 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.

28. The Expanded Kansas River Project is located on the Kansas River, a tributary of the Missouri River. Both rivers are known to support the federally-listed pallid sturgeon (*Scaphirhynchus albus*). However, the pallid sturgeon has not been identified to occur in the project area. Recent surveys have documented the presence of pallid sturgeon in the Kansas River up to River Mile 11, which is 43 miles downstream from the Bowersock dam which is located at River Mile 54.

29. In the EA¹¹ staff determined that the Expanded Kansas River Project, as proposed by Bowersock with staff's additional recommended measures, would have no effect on the federally-listed pallid sturgeon.

NATIONAL HISTORIC PRESERVATION ACT

30. Under section 106 of the National Historic Preservation Act (NHPA)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 a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

31. In its license application, Bowersock included a letter, dated August 20, 2009, from the Kansas SHPO stating that the proposed project would not adversely affect any property listed in or eligible for listing in the National Register. In the EA,¹⁴ staff reached the same conclusion that no historic properties

¹⁰ 16 U.S.C. § 1536(a)(2006).

¹¹ See EA at 26 and 27.

¹² 16 U.S.C. § 470 et seq. (2006).

¹³ 36 C.F.R. Part 800 (2009).

¹⁴ See EA at 31, 32, and 40.

would be affected by the proposed project, but recommended that Bowersock consult with the Kansas SHPO if any new cultural resources are discovered or if Bowersock would perform land-disturbing or land-clearing activities not previously authorized by the license. Article 406 includes these requirements.

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

32. Section 10(j)(1) of the FPA¹⁵ requires the Commission, when issuing a license, to include conditions based on recommendations by federal and state fish and wildlife agencies submitted 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.

33. In response to the March 5, 2007 public notice that solicited comments, final recommendations, terms and conditions, and prescriptions, no section 10(j) recommendations were filed.

SECTION 10(a)(1) OF THE FPA

34. Section 10(a)(1) of the FPA¹⁷ requires that any project for which the Commission issues a license shall 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.

35. As described below, this license, which authorizes 6.5 MW of renewable energy, requires a number of measures to protect and enhance fish and wildlife, geology and soils, water quality, cultural, and recreation resources at the project.

A. Operation and Compliance Monitoring Plan

¹⁵ 16 U.S.C. § 803(j)(1) (2006).

¹⁶ 16 U.S.C. §§ 661 et seq (2006).

¹⁷ 16 U.S.C. § 803(a)(1) (2006).

36. Bowersock proposes to operate the project in run-of-river mode and maintain the water surface elevation of the Bowersock Millpond at 813.5 feet NGVD, plus or minus 6 inches. Staff evaluated this proposal in the EA and concluded run-of-river operation would protect water quality, aquatic biota, and aquatic habitat to the same extent they are protected now, by minimizing fluctuations of water surface levels both upstream and downstream of the project. Maintaining the Bowersock Millpond elevation at 813.5 feet NGVD would improve the efficiency of the existing municipal water withdrawals and provide for recreational boating on the millpond.¹⁸ Therefore, I am including Article 401 which requires these measures.

37. In the EA, staff recommended that Bowersock develop and implement a plan to monitor project operations and water surface elevations in the Bowersock Millpond.¹⁹ Such a plan will establish a framework for periodically confirming that the project is operated in compliance with its license, and will provide important data needed for the licensee and the resource agencies to evaluate what effects, if any, the required water levels and flows have on the resources. Therefore, I am requiring, in Article 402, that Bowersock develop and implement a plan to monitor compliance with run-of-river operation and the water surface levels required in Article 401.

B. Erosion and Sediment Control Plan

38. To protect aquatic resources during construction, Bowersock proposes to implement erosion and sediment control measures which include best management practices. In the EA,²⁰ staff recommended that Bowersock develop and implement an Erosion and Sediment Control Plan to avoid the potential for erosion and sediment deposits to project waters during construction. Article 404 requires this measure.

C. Recreation

39. Bowersock proposes to construct: (1) a pedestrian footpath on the north bank of the Bowersock Millpond; (2) a 10-foot-long by 20-foot-wide fishing deck with a trash receptacle at the tailrace of the north powerhouse; and (3) a canoe

¹⁸ See EA at 42. Staff concluded that the proposed operation and lake level management regime provides multiple benefits and should be maintained.

¹⁹ See EA at 42.

²⁰ See EA at 43.

portage with a canoe put-in and a canoe take-out, connected by a 725-foot-long portage trail. Bowersock also proposes to install signage and kiosks at the north powerhouse and on the flood protection levee trail. In the EA,²¹ staff concluded that the proposed measures would improve access to the project's recreation resources. Article 405 requires a recreation plan which includes these measures.

40. In the EA staff noted that the proposed location for the tailrace canoe put-in appears to be in close proximity (an estimated 75 feet) to the proposed north powerhouse tailrace. Without a yet-to-be constructed north powerhouse, staff could not ascertain the pattern of flows to be released into the tailrace and evaluate potential public safety concerns. Staff recommended that the recreation plan include a provision for Bowersock to reassess the location of the tailrace canoe put-in after the north powerhouse is constructed, when flows in the tailrace have been established. I find that such an assessment to assure public safety is appropriate, and require this measure in Article 405.

ADMINISTRATIVE PROVISIONS

A. Annual Charges

41. 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.

B. Exhibit F and G Drawings

42. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Bowersock filed Exhibit F drawings on February 26, 2010, and Exhibit G drawings on July 29, 2010. Ordering paragraph (C) approves the Exhibit F and G drawings. Article 202 requires the filing of the approved drawings.

C. Amortization Reserve

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

D. Headwater Benefits

²¹ See EA at 43.

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

E. Use and Occupancy of Project Lands and Waters

45. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project lands would be unduly burdensome. Therefore, Article 407 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 and some boat dock construction. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

F. Start of Construction and Review of Final Plans and Specifications

46. Article 301 requires the licensee to start construction of the project works within two years, and complete construction within five years, of the issuance date of the license.

47. Article 302 requires the licensee to provide the Commission's Division of Dam Safety and Inspections, Chicago Regional Office (D2SI-CRO) with cofferdam and deep excavation construction drawings.

48. Article 303 requires the licensee to provide the Commission's D2SI-CRO with final contract drawings and specifications—together with a supporting design report consistent with the Commission's engineering guidelines.

49. Article 304 requires the licensee to provide the Commission with revised drawings of project features as-built.

50. Article 305 requires the licensee to provide the Commission with an independent consultant's inspection report which includes a diver's inspection of all project structures to evaluate the condition of concrete and any downstream scour areas.

G. Project Financing Plan

51. To ensure there are sufficient funds available for project construction, Article 306 requires the licensee to provide the Commission with a project financing plan at least 60 days prior to the start of project construction.

STATE AND FEDERAL COMPREHENSIVE PLANS

52. Section 10(a)(2)(A) of the FPA²² 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.²³ Staff identified and reviewed four comprehensive plans that are relevant to this project.²⁴ No conflicts were found.

CONSERVATION EFFORTS

53. Section 10(a)(2)(C) of the FPA²⁵ requires the Commission to consider the electricity consumption improvement programs of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. Bowersock is not engaged in the transmission or distribution of electrical power. Bowersock proposes to market the project's power to a local utility, which will distribute the power to its service area. I conclude that, given the limits of its ability to influence users of the electricity generated by the project, Bowersock will comply with section 10(a)(2)(C) of the FPA.

SAFE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE PROJECT

54. Staff reviewed Bowersock's preliminary plans to build the project as described in the license application. I conclude that the dam and other project works will be safe when constructed, operated, and maintained in accordance with the Commission's standards and the provisions of this original license.

²² 16 U.S.C. § 803(a)(2)(A) (2006).

²³ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2010).

²⁴ The list of applicable plans can be found in section 5.5 of the EA for the project.

²⁵ 16 U.S.C. § 803(a)(2)(C) (2006).

NEED FOR POWER

55. The proposed project would provide power to meet part of Kansas' power requirements, resource diversity, and capacity needs. The project would be located in the Southwest Power Pool (SPP) region of the North American Electric Reliability Council (NERC). According to NERC's 2009 forecast, demand for energy in the SPP region is projected to grow from 44,500 MW to 50,000 MW over the 10-year planning period from 2009 through 2019. In the SPP about 44 percent of energy is generated from gas, 37 percent from coal, and 6 percent from renewable resources (i.e. hydropower, wind, and solar energy). Over the next 10 years, NERC estimates that energy from renewable resources will increase to 15 percent of the energy mix, mostly as a result of large increases in wind generation.

56. I conclude that power from the proposed project would help meet a need for power in the SPP region in both the short- and long-term. The proposed project would provide low-cost power that may displace non-renewable, fossil-fueled generation and would contribute to a diversified generation mix. Displacing the operation of fossil-fueled facilities may avoid some power plant emissions and create an environmental benefit.

PROJECT ECONOMICS

57. 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.*,²⁶ the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

58. In applying this analysis to the Expanded Kansas River Project, we have considered two options: Bowersock's proposal, and the project as licensed herein.

59. Bowersock's proposal would have an installed capacity of 6.5 MW and generate an average of 32,726 MWh of electricity annually. When we multiply

²⁶ 72 FERC ¶ 61,027 (1995).

our estimate of average generation by the alternative power cost of \$70/MWh,²⁷ we get a total value of the project's power of \$2,291,000 in 2010 dollars. Construction costs and the cost of environmental measures would be about \$20,601,000, and annual operation and maintenance would be \$823,000. In total, the average annual project cost would be \$2,526,000, or about \$77.9/MWh. To determine whether the proposed project is currently economically beneficial, we subtract the project's cost from the value of the project's power.²⁸ Therefore, in the first year of operation, the project would produce power at a cost which is \$235,000, or \$7.19/MWh, more than the cost of alternative power.

60. The staff alternative includes the same developmental proposal as Bowersock's proposal and, therefore, would have the same energy attributes. The estimated costs of additional measures required in this license are either negligible or are part of contingency costs already included in the construction costs. Overall, as licensed herein, the project would produce power at the same cost as proposed by Bowersock.

61. 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 their ability to help maintain the stability of a power system, such as by quickly adjusting the 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-fueled base generating stations and put them back online.

62. Although our 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.

63. 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

²⁷ The alternative power cost of \$70.00 per MWh is based on Bowersock's current sales contract and estimates for a new contract based on current prices in the region.

²⁸ Details of the staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA issued with this license.

Commission considers in determining whether or not, and under what conditions, to issue a license.

COMPREHENSIVE DEVELOPMENT

64. Sections 4(e) and 10(a)(1) of the FPA²⁹ require the Commission to give equal consideration to power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be, in the Commission's judgment, best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to relicense this project, and the terms and conditions included herein, reflects such consideration.

65. The EA for this project contains background information, analysis of effects, and support for related license articles. I conclude, based on the record of this proceeding, including the EA and comments thereon, that issuing an original license for the Expanded Kansas River 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.

66. Based on my independent review and evaluation of the project and the no-action alternative, as documented in the EA, I have selected the Expanded Kansas River Project, as licensed herein, and find that it is best adapted to a comprehensive plan for improving or developing the Kansas River.

67. I have selected this alternative because: (1) issuance of an original license will serve to provide a beneficial, dependable, and an inexpensive source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, recreational resources, and cultural resources; and (3) the 6.5 MW of capacity from a renewable resource may offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution.

²⁹ 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

LICENSE TERM

68. Section 15(e) of the FPA,³⁰ provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.^{31,32}

69. This original license authorizes an extensive amount of construction and environmental measures including: (1) constructing a new powerhouse with four turbine/generator units; (2) replacing 400 feet of wooden flashboards; (3) refurbishing 150 feet of Obermeyer gates; (4) constructing a 20-foot-wide roller gate; (5) installing 765 feet of new transmission line; (6) constructing a fishing deck at the project tailrace; and (7) constructing a canoe portage with put-in and take-out points. Accordingly I will issue this license for a term of 50 years.

The Director orders:

(A) This license is issued to Bowersock Mills and Power Company (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 Expanded Kansas River Hydroelectric Project. Upon the effective date of this license, the exemption for the Kansas River Project No. 2644 is terminated. This license is subject to the terms and conditions of the Federal Power Act (FPA), which are 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 within the project boundary shown on Exhibit G filed on July 29, 2010, to the extent that the Exhibit shows the general project area, and as described in the

³⁰ 16 U.S.C. § 808(e) (2006).

³¹ For relicenses: *See Consumers Power Co.*, 68 FERC ¶ 61,077 at 61,383-84 (1994).

³² For original licenses: *See City of Danville, Virginia*, 58 FERC ¶ 61,318 at 62,020 (1992).

project boundary discussion in this order:

Exhibit G-Licensee ID	FERC No. 13526-	Description
G-1	G-1	Project Boundary (Index Map)
G-2	G-2	Project Boundary (Upper Headpond)
G-3	G-3	Project Boundary (Mid Headpond)
G-4	G-4	Project Boundary (Dam and Tailrace)

(2) Project works which include:

(1) the 3.84-mile-long, 423-acre Bowersock Millpond at normal water surface elevation 813.5 feet National Geodetic Vertical Datum (NGVD); (2) the existing 665-foot-long, 17-foot-high timber-crib Bowersock Dam; (3) 400 feet of 5.5-foot-high, wooden flashboards at the mid-section of the dam; (4) 150 feet of Obermeyer flashboard gates, consisting of 15 gates each 10 feet long, at the south section of the dam; (5) the existing south powerhouse, containing seven turbine/generator units having an installed capacity of 2.14 megawatts (MW); (6) the new north powerhouse with four turbine/generator units, having an installed capacity of 4.397 MW; (8) a new 20-foot-wide roller gate adjoining the north powerhouse; (9) an new intake flume for the north powerhouse protected by trashracks with 4.5 inch open bar spacing; (10) a new 765-foot-long, 12-kilovolt (kV) transmission line which would connect the north powerhouse to an existing 535-foot-long 2.3-kV transmission line at the south powerhouse; and (11) appurtenant facilities.

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

Exhibit F: The following approved Exhibit F drawings filed February 26, 2010:

<u>Exhibit F-Licensee ID</u>	<u>FERC No. 13526-</u>	<u>Description</u>
S1	F-1	West Elevation
S2	F-2	East Elevation
S4	F-3	General Floor Plan

<u>Exhibit F- Licensee ID</u>	<u>FERC No. 13526-</u>	<u>Description</u>
S5	F-4	Floodway Floor Plan
S6	F-5	Turbine Floor Plan
S7	F-6	Elevations
S8	F-7	Elevations
C-1	F-8	North and South Site Plan
C-2	F-9	North Site Plan
C-3	F-10	Elevation of Dam
EP-1	F-11	Existing South Powerhouse Turbine Floor Plan
EP-2	F-12	Existing South Powerhouse Mid-bay Floor Plan
EP-3	F-13	Existing South Powerhouse Entry Floor Plan
EP-4	F-14	North Powerhouse Roof Plan
EP-5	F-15	North Powerhouse Section
EP-6	F-16	Existing South Powerhouse Section (East)
EP-7	F-17	Existing South Powerhouse Section (West)
EP-8	F-18	Existing South Powerhouse Flume Section

(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 Exhibit F and G described above are approved and made part of this license.

(D) This license is subject to the conditions submitted by the Kansas Department of Health and Environment under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1431(a)(1) (2006), as those conditions are set forth in Appendix A to this order.

(E) This license is also subject to the articles set forth in Form L-4 (Oct. 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters of the United States," (*see* 54 F.P.C. 1799 *et seq.*)

attached to this license, and the following additional articles:

Article 201. *Administrative Annual Charges.* The licensee shall pay the United States annual charges, effective as of the date of commencement of project construction, and as determined in accordance with provisions of the Commission's regulations in effect from time to time, for the purposes of:

(1) reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 6.5 megawatts.

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

(a) Three 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-13526-### through P-13526-###) 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 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 Chicago Regional Office.

(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 Commission's Division of Dam Safety and Inspections Chicago Regional Office. Exhibit F drawings must be segregated from other project exhibits and identified as (CEII) material under 18 CFR §388.113(c). 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-13526-###, G-1, Project Boundary (Upper Headpond), 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 geo-referenced 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. A single electronic boundary polygon data file is required for the project boundary. 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-13526, 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-13526, project boundary metadata, MM-DD-YYYY.TXT].

Article 203. Amortization Reserve. Pursuant to section 10(d) of the Federal Power 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 the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 301. *Start of Construction.* The licensee shall commence construction of the project works within two years from the issuance date of the license and shall complete construction of the project within five years from the issuance date of the license.

Article 302. *Cofferdam Construction Drawings.* Before starting

construction, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations, and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdam, the licensee shall submit one copy to the 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 construction drawings and specifications and the letters of approval.

Article 303. *Contract Plans and Specifications.* At least 60 days prior to the start of any construction, the licensee shall submit one copy of its plans and specifications and supporting design document to the Division 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 to the D2SI-Chicago Regional Engineer 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 304. *As-built Drawings.* Within 90 days of completion of all construction activities authorized by this license, the licensee shall file, for Commission approval, revised Exhibits A, F, and G, as applicable, describing and showing 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 305. *Inspection by Independent Consultant.* An Independent Consultant's Inspection Report is due within two years of the issuance date of the license in accordance with Part 12, *Safety of Water Power Projects and Project Works*, of the Commission's Regulations. The inspection should include a diver's inspection of all project structures to evaluate the condition of concrete and any downstream scour areas.

Article 306. *Project Financing Plan.* At least 60 days before starting project construction, the licensee shall file with the Commission for approval a project financing plan. The plan must show that the licensee has acquired the funds, or commitment for funds, necessary to construct the project in accordance with this license. The licensee shall not start any project construction or ground-disturbing activities, before the project financing plan is approved.

Article 401. *Run-of-River Operation and Bowersock Millpond Levels.* To protect aquatic resources in the Kansas River, the licensee shall operate the Expanded Kansas River Hydroelectric Project in run-of-river (ROR) mode, where instantaneous outflows approximate instantaneous inflows to the project. In addition, the licensee shall operate the project to maintain the level of the Bowersock Millpond at elevation 813.5 feet National Geodetic Vertical Datum (NGVD), with deviations no greater than plus or minus 6 inches due to operational constraints.

The licensee shall at all times act to minimize the fluctuation of the Bowersock Millpond surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream of the project, approximate the sum of inflows to the project millpond as measured by hourly water surface elevations.

ROR Operation and the millpond surface elevations may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon mutual agreement between the Kansas Department of Health and Environment, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers. If project operations or millpond elevations are so modified, the licensee shall notify the Commission as soon as possible, but not later than 48 hours after each such incident, and shall provide a reason for the change in project operations.

Article 402. *Project Operations Monitoring Plan.* Within 90 days from the date of license issuance, the licensee shall file with the Commission, for approval, a plan to monitor compliance with run-of-river (ROR) operation and the Bowersock Millpond elevations as required in Article 401.

The plan shall include, at minimum: (1) the location of gages to record millpond elevations, flows through the turbines, and gated releases; (2) procedures to record water surface elevations at least hourly; (3) a description of how the project would be operated to maintain compliance with the ROR requirement of Article 401; (4) procedures to maintain ROR operation during planned and emergency shut-downs; and (5) procedures for refilling the Bowersock Millpond in the event of flashboard collapse, while maintaining adequate flows downstream during refill to maintain aquatic resources. The plan shall detail the mechanisms and structures that would be used, including any periodic maintenance and calibration necessary for any installed devices or gages, to ensure that the devices work properly, and shall specify how often the millpond elevations and ROR operational compliance shall be recorded.

The licensee shall prepare the plan after consultation with the Kansas Department of Health and Environment, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service. The licensee shall include with the plan a schedule for implementing the plan, documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include licensee's reasons, based on project-specific information.

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

Article 403. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretaries of the Interior pursuant to section 18 of the Federal Power Act.

Article 404. *Erosion and Sediment Control Plan.* At least 60 days before the start of any ground-disturbing activities, the licensee shall prepare and file for Commission approval an erosion and sediment control plan. The plan shall include, but not be limited to: (1) a description of the measures to be used to stabilize the streambanks and control soil erosion including a site map showing the location of cofferdams, training walls, armoring, rip rap, staked hay bales, geotextile silt fence areas, excavated material stockpile area, and a temporary siltation catch basin; (2) a description of the measures to be used for storage and disposal of spoil materials and the locations of any spoil disposal areas; (3) a description of measures proposed for maintaining on site sanitary facilities; (4) a description of measures proposed for revegetating disturbed areas, including a description of the native plant species used, planting densities and fertilization or other requirements; (5) a provision to obtain approval from the U.S. Army Corps of Engineers in the event spoils are proposed to be disposed of on lands under their jurisdiction; and (6) an implementation schedule.

The licensee shall prepare the plan after consultation with the Kansas Department of Wildlife and Parks, Kansas Department of Health and Environment, and the U.S. Army Corps of Engineers. 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 resource agencies, and specific descriptions of how the agencies' comments

are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and 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. No land-disturbing activities or land-clearing activities shall begin at the project 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 405. Recreation Plan. Within 1 year of license issuance, the licensee shall file for Commission approval, a Recreation Plan to improve the recreation resources at the Expanded Kansas River Hydropower Project. The plan shall include, but not be limited to, the following items: (1) a new pedestrian footpath and new canoe portage trail along the north bank of the Bowersock Millpond; (2) a new fishing deck, with trash receptacle and trash removal, at the tailrace of the north powerhouse; (3) a kiosk at the north powerhouse and a kiosk on the Corp's flood protection levee and associated signage; (4) a discussion of how the needs of the disabled were considered in the planning and design of the recreation facilities; (5) the entity, or entities, responsible for operating and maintaining the new project recreation facilities; (6) a description of soil erosion and sediment control measures to be used where ground-disturbing activities are proposed; and (7) an implementation schedule. The plan shall include a description of each of the above facilities and improvements, including appropriate site drawings, specifications, and maps showing their type and location in relation to the project boundary.

The recreation plan shall also include a provision to conduct a project facility assessment, after construction of the north powerhouse is completed when flows in the tailrace have been established, to determine the location for the canoe put-in at the tailrace of the north powerhouse (i.e. whether approximately 75 feet from the tailrace of the north powerhouse or some other location is appropriate), and for filing, for Commission approval, a report of the assessment results. The required assessment shall be conducted in consultation with the U.S. Army Corps of Engineers (Corps), the Kansas Department of Wildlife and Parks (Kansas DWP), and the Kansas State Historic Preservation Office (Kansas SHPO). The report shall include, but not be limited to, a discussion of the results of the project facility assessment, documentation of consultation, copies of recommendations on the completed report after it has been prepared and provided to the agencies above, and specific descriptions of how the agencies' comments are accommodated by the report. The report shall also include a discussion of the canoe put-in and schedule for construction, cost estimates, and conceptual design drawings in

relation to the project boundary. The licensee shall allow a minimum of 30 days for the agencies 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 Recreation Plan shall be developed after consultation with the Corps, Kansas DWP, Kansas SHPO, and the city of Lawrence which maintains the flood protection levee in the project area. 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 prior to 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. No land-disturbing activities or land-clearing activities shall begin at the project 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. Cultural Resources Protection. The licensee, prior to starting any land-clearing or land-disturbing activities within the project boundary, other than those specifically authorized by this license order, shall consult with the Kansas State Historic Preservation Office (Kansas SHPO) and the U.S. Army Corps of Engineers (Corps).

If the licensee discovers previously unidentified archeological or historic properties 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 properties and consult with the Kansas SHPO and the Corps to determine the need for any additional cultural resource studies or measures. If no additional studies or measures are needed, the licensee shall file with the Commission documentation of its consultation with the Kansas SHPO and the Corps.

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 Kansas SHPO and the Corps. 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 for listing 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 begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property discovered during construction, until informed by the Commission that the requirements of this article have been fulfilled.

Article 407. 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 submit a letter to the Director, Office of Energy Projects, 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 Director, 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.

(F) 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.

(G) 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. § 8251 (2006), and section 385.713 of the commission's regulations, 18 C.F.R. § 385.713 (2010). 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-4
(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

**TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED
MAJOR PROJECT AFFECTING NAVIGABLE
WATERS 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 United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and

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

Article 13. On the application of any person, association, corporation, Federal Agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures 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 statutes and regulations.

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

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

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

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

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

Article 26. 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 27. 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 28. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

APPENDIX A

Water Quality Certificate Conditions for the Expanded Kansas River Project issued by the Kansas Department of Health and Environment on April 1, 2010.

Pursuant to Clean Water Act Section 401 and KAR 28-16-28f (c), the Kansas Department of Health and Environment finds this project will not result in a violation of Kansas Water Quality Standards and hereby issues a Water Quality Certification for execution and subsequent operation of the Bowersock and Mills Power Company (BMPC) expansion project, subject to the following conditions:

CONDITIONS

1. A copy of this water quality certification shall be posted on site during construction.
2. The BMPC shall implement good housekeeping practices to assure conditions do not cause the following:
 - a. Surface waters of the state within and below the project area to contain discarded solid material, including trash, garbage rubbish, offal, grass clippings, discarded building or construction materials, car bodies, tires, wire and other unwanted or discarded materials [KAR 28-16-28e(b)(3)].
3. The BMPC shall avoid or control the discharge of suspended solids from construction activities and removal of riparian vegetation so that they may not cause:
 - a. Surface waters of the state within and below the project to have floating debris, scum, foam, froth and other floating materials directly or indirectly attributable to the project [KAR 28-16-28e(b)(4)].
 - b. Surface waters of the state within or below the project to have deposits of sludge or fine solids [KAR 28-16-28e(b)(6)].
 - c. Alteration of the natural appearance of surface waters of the state within or below the project by the addition of color-producing or

- turbidity-producing substances of artificial origin [KAR 28-16-28e(b)(8)].
- d. The concentration of dissolved oxygen in the Kansas River to be lower than 5.0 mg/L.
 - e. Addition of suspended solids to the Kansas River in amounts and concentrations that will interfere with the behavior, reproduction, physical habitat, or other factors related to the survival and propagation of aquatic or semi aquatic life or terrestrial wildlife [KAR 28-16-28e(c)(2)(B)].
4. Construction activities disturbing one acre or more are subject to the National Pollutant Discharge Elimination System (N.P.D.E.S.) storm water permit requirements of 40 C.F.R. 122.26. The BMPC shall contact Mr. Larry Hook at 785/296-5549, lhook@kdheks.gov; Bureau of Water - Industrial Programs (BOW IP) for instructions or visit KDHE's website: www.kdheks.gov/stormwater. This permit requires a Stormwater Pollution Prevention Plan (SWP3) be prepared for implementation and be available for submittal to KDHE BOW IP.
 5. The BMPC shall avoid or control the discharge of nutrients from construction activities, removal of permanent riparian vegetation, so that the project does not cause:
 - a. Any surface waters of the state within and below the project to have floating debris, scum, foam, froth and other floating materials directly or indirectly attributable to the project [KAR 28-16-28e(b)(4)].
 - b. Any surface waters of the state within and below the project to contain taste and odor producing substances at concentrations which interfere with the production of potable water by conventional water treatment processes, impart an unpalatable flavor to edible aquatic or semi-aquatic life or terrestrial wildlife or that result in noticeable odors in the vicinity [KAR 28-16-28e(b)(7)].
 - c. Alteration of the natural appearance of surface waters of the state within or below the project by the addition of color-producing or turbidity-producing substances of artificial origin [KAR 28-16-28e(b)(8)].

- d. The introduction of plant nutrients into streams, lakes, or wetlands from artificial sources shall be controlled to prevent the accelerated succession or replacement of aquatic biota or the production of undesirable quantities or kinds of aquatic life [KAR 28-16-28e(c)(2)(A)].
 - e. The introduction of plant nutrients into surface waters designated for primary or secondary contact recreational use shall be controlled to prevent the development of objectionable concentrations of algae or algal by-products or nuisance growths of submersed, floating, or emergent aquatic vegetation [KAR 28-16-28e(c)(7)(A)].
 - f. The concentration of dissolved oxygen in the Kansas River to be lower than 5.0 mg/L.
6. BMPC shall avoid or control the discharge of *Escherichia-coli* bacteria from the daily wastewater associated with manned operations and maintenance, so that the project does not cause the *Escherichia-coli* bacteria concentration of the Kansas River to exceed a geometric mean of 427 organisms per 100 milliliters during the period of April through October 31 and geometric mean of 3,843 organisms per 100 milliliters during the period of November 1 through March 31.
 7. The BMPC shall avoid or control the discharge of toxic substances, oil and grease and other fluids from construction activities, so that the project does not cause:
 - a. Any surface waters of the state within and below the project area to have a public health hazard, nuisance condition or impairments of designated uses [KAR 28-16-28e(b)].
 - b. Any surface waters of the state within and below the project area to have toxic substances, radioactive isotopes, and infectious microorganisms in concentrations or in combinations that jeopardize the public health or the survival or well-being of livestock, domestic animals, terrestrial wildlife or aquatic or semiaquatic life [KAR 28-16-28e(b)].
 - c. Any surface waters of the state within and below the project area to have a visible oil and grease film or sheen on the water surface or on submerged substrate or adjoining shore lines, nor have a sludge

or emulsion deposit below the water surface of adjoining shorelines [KAR 28-16-28e(b)].

- d. The pH in the Kansas River to be below 6.5 or above 8.5.
 - e. In the Kansas River listed harmful concentrations of any substance alone or in combination with other substances causing toxic, carcinogenic, teratogenic, or mutagenic effects in humans [KAR 28-16-28e(c)(3)(C)].
 - f. Concentrations of substances that bio-accumulate in the tissues of edible organisms to exceed a cancer risk level of (10^{-6}) in persons consuming organisms taken from the Kansas River [KAR 28-16-28e(c)(4)(B)].
 - g. The concentration of dissolved oxygen in the Kansas River to be lower than 5.0 mg/L.
8. The water quality protection plan previously referenced on page 2 shall include the water quality protection measure listed below if not already addressed in the SWP3 as described in Condition 4.
- a. **Riparian/Wetland Areas:** Minimize removal or disturbance of riparian/wetland areas (areas adjacent to water bodies). KDHE encourages the use of plants consistent with adjoining vegetation materials to minimize impacts from improper handling of fertilizers and pesticides.
 - b. **Solid Waste:** All waste materials produced by the construction project shall be disposed of in accordance with the provisions of the Kansas solid waste management statutes and regulations (K.S.A. 65-3401 and K.A.R. 28-29-1 et. seq.) or applicable local rules. Good house keeping including personal refuse such as food containers, sacks etc. shall be addressed. Good house keeping practices described above should also be incorporated into operations and management of wetlands and other structures once constructed to the extent practicable.
 - c. **Fuels: Chemicals and Maintenance Areas:** All fuels and chemicals necessary to complete the project shall be stored in such a manner that accidental spillage is minimized or can be temporarily contained before reaching the water body. Equipment maintenance areas shall also be located in this manner.

- d. The applicant has stated the bathrooms will be equipped with composting toilets whose solids will be disposed of compliant with county codes. All other wastewater (grey water, including floor drains) will be deposited into a self contained receptacle and regularly pumped for proper disposal. This is consistent with the requirement to comply with KAR 28-5-1 through 9, Bulletin 4-2 and county codes; and meet local ordinances. The BMPC shall contact the Lawrence-Douglas County Health Department to assure compliance with local codes and ordinances: Mr. Richard Ziesenis, (785) 843-3060, rziesenis@ldchd.lawrence.ks.us.
 - e. **All stormwater** shall be managed in a manner consistent with local ordinances administered through the City of Lawrence.
 - f. **Alternatives** to solvents and cleaners should be considered to prevent accidental spills directly to the Kansas River.
 - g. **Materials** used for bank stabilization or armoring shall be free of pollutants likely to wash off into the Kansas River.
 - h. **Spills:** Should a spill of fuel or discharge of pollutants occur, the local emergency staff should be contacted first by dialing 911. The Kansas Department of Health and Environment shall then be notified immediately: (785) 296-1679 (24 hours a day.) These incidences should also be reported to the National Spill Response Center (1-800424-8802). *Hazardous materials spills and air releases that meet federal reportable quantities must also be reported to Kansas Division of Emergency Management (800-275-0297).* These reporting numbers shall be posted in several locations around the site. A Spill Prevention and Response Plan should be prepared. This should include reportable quantity limits (see www.kansas.gov/kdem).
9. This certification does not relieve the BMPC of the responsibility for any discharge into waters of the state. The Kansas Department of Health and Environment retains the option of revoking or revising this certification any time an inappropriate discharge may occur. As provided by K.S.A. 65-171(f), failure to comply with the conditions of this certification may subject the responsible party to fines up to \$10,000 per violation with each day the violation occurs constituting a separate violation.
 10. If the BMPC believes the conditions of this certification will result in impairment of important social and economic development, the BMPC is

advised of the variance provisions of KAR 28-16-28b(jjj) and KAR 28-16-28f(e).